DIANE J. URISTA

The Moving Body in the Aural Skills Classroom

A Eurhythmics Based Approach

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To Jon

We must never forget that music is movement,
always going somewhere, shifting and changing,
and fowing, from one note to another;
and that movement can tell us more about the way we feel
than a million words can.

—Leonard Bernstein, “What Does Music Mean?” 1958

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PREFACE

Te seeds for this book were planted over twenty years ago when I participated in my frst of several Dalcroze eurhythmics workshops facilitated by the late Robert Abramson from the Juilliard School. Rather than tapping out rhythms or talking about phrases, cadences, and form, we moved to these concepts—creating physical images of them with our bodies. We met every day for three weeks, and near the end—much to my astonishment—moving to music began having a profound, almost magical efect on my engagement with music, both as a performer and as a listener. As a performer, eurhythmics reinforced my sense of control and concentration; it was much easier to express through my body the musical ideas that were in my mind. As a listener, my ears were opened to fner degrees of expressive nuance. In many respects, my three-week submersion into the world of Dalcroze eurhythmics had proven much more far-reaching than the years of traditional ear training I had experienced as an undergraduate music major. Anyone who has had extensive training in eurhythmics knows that it has to be experienced to be understood, for the knowing comes from the doing.

ACKNOWLEDGMENTS

First and foremost I wish to thank my editor, Norman Hirschy, at Oxford University Press for his unfagging support, patience, and sage expertise throughout this entire process. I couldn't have completed this book without him. I would also like to thank my husband, Jon, who was with me every step of the way, for which I am eternally grateful. In addition, I thank my dissertation advisors at Columbia University, Fred Lerdahl and Joseph Dubiel, who, in the initial stages of my dissertation, helped me integrate the nonverbal practice of eurhythmics into the verbal discipline of music theory, which in many respects formed the foundation for this book. Tanks also to John Buccheri at Northwestern University and George Fisher at New York University for allowing me to test-drive some of my germinating ideas with colleagues and undergraduate students, and to the Mellon Foundation for their generous support in funding many of the technical aspects of this project. Tis book would simply not exist without the dedicated eurhythmics practitioners with whom I have had the privilege to study over the past twenty-fve years—particularly the late Robert Abramson from the Juilliard School, who introduced me to the wonders of eurhythmics in the 1980s and hooked me for life. My thanks also to the many inspiring eurhythmics practitioners with whom I studied thereafter, including Gabriella Chrisman, Anne Farber, Herb Henke, Stephen Moore, Lisa Parker, and the late Marta Sanchez. I would also like to thank my colleagues Bill Bauer, David Gilson, Roger Graybill, William Marvin, Marshall Grifth, Deborah Rifkin, Gregory Ristow, Brian Sweigart, Nadia Tarnowsky, and Kathy Tomsen, all of whom helped shape many of the ideas and exercises that are presented in this book.

Last but not least, my heartfelt thanks to the many talented students whom I have had the great honor to teach throughout the years, especially those who participated in the photos and videos for the Companion Website. Teir inventiveness and passion for music inspire me to continue asking how and why music enthralls and moves us so deeply.

ABOUT THE COMPANION WEBSITE

www.oup.com/ us/ movingbodyauralskillsclassroom

Username: Music5
Password: Book1745

Oxford has created a password-protected website to accompany Te Moving Body in the Aural Skills Classroom. Material that cannot be made available in a book, namely, videos of students demonstrating exercises, is provided here. Te reader is encouraged to consult this resource in conjunction with select chapters in the book. Examples available online are indicated in the text by this symbol .

The Moving Body in the Aural Skills Classroom

Introduction

Music is composed of sounds in motion, and is performed by motions that produce sounds.

— Abramson, 1986

It cannot be fully expressed in words, because it concerns the deep preverbal levels of spirit.

— Nachmanovitch, 1990, 12

I. PURPOSE

Why the Moving Body in the Aural Skills Classroom?

Te purpose of this book is to give practitioners at the college level the information and tools they need to successfully integrate the moving body into their aural skills classroom.[1] In most traditional aural skills curricula, the development of the body is not as signifcant as the training of the mind. When one considers the physical nature of music, it seems curious that current aural skills texts place little or no emphasis on approaches that engage the moving body. What distinguishes this book from other texts is its central concern with movement to music as a tool for developing perception and the kinesthetic aspects humans experience in performance. Anyone who has had extensive training in Dalcroze eurhythmics knows the profound benefts of learning musical concepts through movement; however, the problem for most college instructors is that such knowledge is specialized and requires many hours of training.[2]

Tis text—infuenced by Dalcroze eurhythmics—is a practical guide for undergraduate college teachers and students, intended either as a

teaching manual or as an aural skills supplementary textbook for students. Designed for a three- or four-semester aural skills curriculum, the book presents a variety of movement, singing, and ear training exercises that teach rhythmic, melodic, harmonic, and formal concepts in a graded though fexible sequence, allowing instructors to select individual exercises in any order to provide a more embodied approach to any skill or concept. Activities involve movement through space (traveling movement) and movement in place (stationary movement) for those teaching in small classrooms.

Te approach assimilates easily into any college or conservatory classroom; furthermore, it is compatible with the following singing systems: fxed-do, moveable-do, letter names, and scale degree numbers. Te movement exercises are designed to enhance and work in conjunction with the melodic and rhythmic examples presented in other texts, to provide a learning experience more holistic than traditional approaches in the development of musicianship. Te book also can serve as a reference manual or supplementary textbook for a course dedicated to eurhythmics.

One of the primary purposes of this book is to develop communication between the brain, which perceives and analyzes, and the body, which performs (in the neuromuscular system or kinesthetic sense). Doing so (1) trains performers to express more efectively, through their bodies, the musical ideas that are in their minds, and (2) opens students' perception to fner degrees of expressive nuance in the music.[3] Dalcroze explains:

> Te aim of all exercises in eurhythmics is to strengthen the power of concentration, to accustom the body to hold itself, as it were, at high pressure in readiness to execute orders from the brain, to connect the conscious with the sub-conscious and to augment the sub-conscious faculties.… Tese exercise tend to create more numerous habitual motions and new refexes, to obtain the maximum efect by a minimum of efort, … and install order and clarity in the organism.[4]

Movement to music stimulates all the capacities we use to engage in music: the aural, visual, tactile, and muscular senses; our reasoning faculties; and our ability to feel and to act on our feelings. Tis is one reason that movement to music is such a powerful pedagogical tool.[5] Furthermore, the approach cultivates an active, cooperative learning environment, in which students learn by experimentation and from each other. Te exercises promote confdence by allowing students to progress at their own pace. Engaging the moving body also strengthens concentration, musical memory, improvisatory skills, and artistic freedom.

Healing the Mind-Body Split in College Music Training

One of the primary goals of Dalcroze's approach was to heal what he perceived as the "mind-body split" in musical training, as well as to promote the vital relationships that exist between the intellect and bodily senses.[6] To him, the entire body, not just the ear and mind, must be trained since it contains vital sensory information for developing a sensitivity to musical sound.[7] Dalcroze named his approach "eurhythmics," which is derived from the Greek word meaning "good fow": eu = good and rhythm = fow.[8] Eurhythmics is made up of three main branches, (1) rhythm, (2) solfège/ear training, and (3) improvisation,[9] as well as a fourth, lesser-known branch called (4) plastique animée—an unstylized choreography that promotes expressive freedom through movement. Tis book explains how to integrate the pedagogical strategies and benefts of all four branches into a traditional aural skills classroom to produce an environment that trains the mind, ear, and body.[10]

Rhythms from the Body

A fundamental premise behind eurhythmics is that musical rhythms are derived from the natural patterns of the body, such as walking, bending, sighing, jumping, and so on. Dalcroze believed our physical movements were powerful referents for our understanding of musical rhythms and motion. As he explains:

> Rhythm, like dynamics, depends entirely on movement, and fnds its nearest prototype in our muscular system. All the nuances of time—allegro, andante, accelerando, ritenuto— all the nuances of energy—forte, piano, crescendo, diminuendo can be "realized" by our bodies, and the acuteness of our musical feeling will depend on the acuteness of our bodily sensations.[11]

From Dalcroze's speculations about the correlations between movement and music, Abramson postulated the following formulation:

> Whenever the body moves, the sensation of movement is converted into feelings that are sent through the nervous system to the brain which, in turn, converts that sensory information into knowledge. Te brain converts feelings into sensory information about direction, weight, force, accent quality, speed, duration, points of arrival and departure, straight and curved fow paths, placement of limbs, angles of joints, and changes in the center of gravity.[12]

Dalcroze believed a "psychic" connection existed between our bodily experience with time, space, energy, weight, and balance in the physical domain and our aural perception of sound in the musical domain. He devised the following diagram to explain the relational aspects of the dynamic fow of physical motion through gravitational space and our aural perception of motion in the musical domain:

$$\frac{\text{Time} + \text{Space} + \text{Energy} + \text{Weight} + \text{Balance} + \text{Plasticity}}{\text{Gravity}}$$

Consciously moving to music engages the kinesthetic sense and trains us to balance these components efectively. As Waterman states, the approach "is not a passive experience but one in which the body enters completely, making possible a large amount of the motor memory from which a sense [my italics] of rhythm is built."[13] As eurhythmics practitioners Schnebly-Black and Moore explain:

> Dalcroze teachers blend the aural perceptions of dynamics, beat, and pitches with muscular sensations of time, space, and energy. Out of this combination evolves a more subtle and expressive set of musical impulses and musical understanding. Te addition of body movement to music training increases the amount of sensory information forming musical perceptions. When the whole body is used, the nervous system draws information from many networks: not just the hands, but the arms, shoulders, rib cage, and hips. Te eyes, and ears, as well, join in a blending of sensory systems that reinforce each other in receiving and analyzing musical information…. We can enlarge the moment of perception—concentrating awareness on the earliest split second, when sensations are strongest.[14]

What Is the Kinesthetic Sense or "Sixth Sense"?

Most of us have been taught that we experience our world with fve senses: sight, sound, taste, smell, and touch; however, Dalcroze and many others in the kinetic arts consider movement a domain of perception as well, which is often referred to as the neglected "sixth sense," muscular sense, or kinesthetic sense. Te word kinesthetic comes from the Greek kine (motion) and aesthesia (to sense). We are using the term "kinesthesia" to include our awareness of space, our positioning and relationship to other objects around us, our sense of time and balance, and the amount of energy we put forth in our efforts, all of which involve the contraction

and retraction of our muscles and varying degrees of tension and release.[15]

It is important to recognize that the very nature of our "motion sensing" and all its components inform both directly and indirectly our musical perceptions. Given that the kinesthetic sense is a vital tool for expressive artistry, it too must be nurtured and developed, as our other senses are. As music philosopher David Lidov notes:

> A sense persists of strong and precise and intimate correspondences between the details of music and bodily properties: gestures, tensions, and postures as well as psychosomatic (or neuro-chemical) properties as states of consciousness, moods, and emotions. Tose correspondences which involve kinesthesia in a direct and simple way appear ubiquitous.... Movement is not a "meaning" of music but rather an intrinsic property.[16]

Composer Roger Sessions, also fully aware of the intimate connections between body and music, writes, "Music is signifcant for us as human beings principally because it embodies movement of a specifcally human type that goes to the roots of our being and takes shape in the inner gestures which embody our deepest and most intimate responses."[17]

Traditional versus Embodied Approach

To better illustrate the diferences between a traditional approach and the embodied approach ofered here, consider the diferences in teaching the simple anapest rhythm: short- short- long.

Traditional Approach

- Given: Te instructor gives the rhythm vocally or on an instrument, or it is heard on a computer that generates a series of undiferentiated beat patterns.
- Response: Te student intones, claps, or taps back the rhythm with perhaps more emphasis on beat one to show a metric downbeat.

In both cases, the rhythm is given and performed with accuracy but often lacks musicality. Tat is, little or no attention is paid to the beat's duration (time), dynamic level (energy), and articulation (plasticity, i.e., the attack and release of note values).

Embodied Approach

- Given: Te instructor plays or vocalizes the short-short-long rhythm, but with expressive considerations to duration, dynamics, and articulation.
- Response: Students experiment with physical gestures and/or vocalizations that represent varying intensifcations in dynamic fow and quality between beats.
- Response: Students perform each other's interpretations of the rhythm paying special attention to diferences in expressive infections for each rhythm.

What we have described are two approaches to musical training, the more traditional mind-ear approach versus an embodied approach. In an aural skills class, beats are often represented in the same physical place and in the same way. Tis action indicates the timing of beats but lacks two fundamental aspects of good musicianship: a sense of dynamic motion and quality. Clapping or intoning beats without attention to expressive nuance leads to a mechanical, unmusical performance. Representing beats in different places and in diferent ways shows the varieties of dynamic fow between and through beats, that is, their qualitative diferences (metrical, phenomenal, and structural). Tese are general descriptions that will be detailed in the following chapters. In particular, see Chapter 1, Movement Tenets and Chapter 3, Expressing Gestural Rhythms: Vocalizing, Clapping, and Stepping Rhythms.

Musical Affect and Expressive Performance

An embodied approach promotes a dynamic interplay between the learning of musical concepts and their application to expressive performance.[18]

All too often, an environment is set up in the aural skills classroom where musicality is trained out of, rather than into, our students. In an embodied approach, musicality is not simply discussed or interjected as an afterthought; musicality is built into the activities themselves. William Schuman, former president of the Juilliard School, recognized the importance of an expressive approach to teaching music when he wrote:

> During the years that I taught at Sarah Lawrence College, I learned very quickly that for education to be meaningful, the student has to undergo an emotionally valid experience.… In music the absence of a "felt" reaction means that

> the composition, even if its techniques were understood, did not "register" with the student.... Tis should not be construed to mean that the study of music can be a nonintellectual pursuit—an emotional bath—but rather that "feeling" includes the sensed application of all intellectual data to the living organism of the art.[19]

Dalcroze also believed that "the truly educative power of music lay in the domain of its expressivity."[20]

II. METHODOLOGY

Experience before Analysis

Eurhythmics rests on the premise that "theory should follow practice." As Dalcroze noted, music theory is too often the study of the signs of music, instead of being the experience and analysis of music itself. It ought to be a consequence, not an end in itself.[21] He questioned why musical concepts were often taught as abstractions, divorced from their sound, feelings, and embodied musical meaning. Dalcroze maintained that too much thought-driven impulse could eventually inhibit a natural act. He believed students need to be aware of what they are doing while learning, to make connections between their acting bodies and thinking minds. As he explains, "Te practice of bodily movements awakens images in the mind. Te stronger the muscular sensations, the clearer and more precise the images, and thereby the more metrical and rhythmic feeling is developed; for feeling is born of sensation."[22] In a eurhythmics-based approach, "understanding arises frst at a bodily, pre-refective level; any intellectual processing occurs afterwards."[23] A primary aim of an embodied approach is for students to say not only "I know," but also "I have experienced."[24]

Spiral of Learning

Te presentation of musical concepts follows the spiral of learning principle: listening to moving; moving to feeling; feeling to sensing; sensing to analyzing; analyzing to reading; reading to writing; writing to improvising; and improvising to performance.[25] Students are to hear and move to a musical concept frst, to encourage aural independence away from the written score, and to establish a link between aural perceptions and muscular sensations. As eurhythmics practitioner Arthur Becknell reminds, "In the Dalcroze method, rhythm should be felt bodily and executed

through bodily movement before notational symbols are introduced. Hearing, singing, moving, reading, and fnally, notating the music was the pattern in Dalcroze classes."[26]

Sensation before Conceptualization

Engaging the moving body allows participants to experience the sensation of a musical event before it is conceptualized. As eurhythmics practitioners Moore and Schnebley-Black explain, "Eurhythmics focuses on the [physical] sensation itself, letting one moment develop into the next—seeking not identifcation but sensory continuity…. [Participants] learn to use information fresh from sensation, before [my italics] it has been consciously analyzed."[27] As Alperson points out, "We often underestimate our capacity to get the message through our senses—we try to analyze an impression before we fully experience it."[28] More information is often packed inside a kinesthetic image than a literal explanation; we take what works from the image and shed the rest. Kinesthetic images beget more images, fueling students' imagination to cultivate their own personal images. As eurhythmics practitioner Timothy Caldwell explains:

> A Dalcrozian constantly looks for ways to enlarge the repertoire of the conscious kinesthesia because that automatically enlarges the range of choices by the unconscious. Te imaginary kinesthesia then has a broader selection to choose from when it is called on. A reason for all of this emphasis on kinesthesia is that a goal of eurhythmics is to produce a clear and compelling performance in which the [musician] has learned the dance of the music and then is able to stand quietly and make the souls of the audience dance and sway.[29]

Internalization and Automatisms

Dalcroze believed that true learning does not take place until a concept or skill is internalized through repetition; however, it is important to note that he was not referring to a literal repetition or drilling, which can be deadening. Rather, he meant to create repetition through variety and continuous challenge. Te goal is for students to experience a concept in multiple ways to enhance engagement and ensure internalization.

For instance, the learning of a single anapest (short-short-long) rhythmic pattern could involve (1) clapping or stepping through space, (2) inventing a gesture using diferent parts of the body, (3) passing the rhythm

around a circle, (4) modifying the tempo twice as fast or slow, (5) expressing its complementary rhythm (see Chapter 1), (6) using the rhythm thematically in an improvisation, (7) incorporating it into a canon, or (8) setting a text to it.[30] Embodying a single concept deepens the internalization process, thereby producing a skill that becomes automatic and provides more depth, breadth, and nuance to the student's musical understanding.

Improvisation: Cultivating One's "Voice"

Moving to music encourages a personal spontaneous engagement with music—a living exploration of a musical concept versus a prescriptive analytical or verbal explanation. Many of the movement-to-music activities are improvisatory, allowing the mover's own interpretive "voice" to emerge. Students express themselves based on their unique carriage, attitude, and feeling response to the musical stimulus. As Alperson notes, "Now the students' own subjective responses to music are made available to them as referents in the learning process."[31] Improvisation invites spontaneity and expressive freedom, vital behaviors that become instilled and later transferred to enhance the performance of composed works.

Physiological Evidence

From a physiological perspective, it is interesting to note that several of the cranial nerves including the vestibular nerve (or vestibular system), responsible for registering movement, reside in the inner ear or cochlea.[32] Te vestibular system is composed of the inner ear and proprioceptive, kinesthetic, and touch receptors stationed in the tissue of muscles and joints located throughout the body—an elaborate communication system that transmits various kinds of knowledge exchanged between the inner ear, brain, and body. Movement specialist Bonnie Bainbridge Cohen divides our perception of movement into two main categories: sensing and perceiving. Sensing is the mechanical aspect, the stimulation of sensory nerves that receive and register information about ourselves and other's movements. Tis includes our sense of gravity, space, time, energy, weight, and postural balance. Perceiving is about how we interpret the incoming sensory information: the emotions, memories, and intentions associated with movement.[33] Te fact that the vestibular system is connected to the inner ear may be one of many reasons there is such a strong correlation

between our kinesthetic perception of movement and our aural perception of musical sound. Recent research points to the role the vestibular system plays in our perception of musical rhythm and meter, and in the cross-modal interaction between our auditory perception of rhythm and physical movement.[34] More research needs to be done to determine just how these two domains of perception interact with and reinforce one another.

Reflective Stillness: Movement Is Not an End in Itself

As a final note, it is important to acknowledge that the act of moving to music is not an end in itself, but rather the means to an end. Engaging the moving body is not simply about moving to music; more important, it is about what is learned about music through the process of physical representation. Kinesthetic sensations we experience consciously through movement are later drawn upon subconsciously to enhance future listening and performing experiences—what eurhythmics practitioner Marja-Leena Juntunen refers to as "refective stillness."[35] Tomas Clifton explains, "Even when my physical body may be at rest while listening to music … my "self" is in motion by being linked to, and attuned with, the motions of the music, in an act of mutual possession."[36] Eurhythmics heightens our awareness and feeling response to the dynamic properties of physical movement itself, which in turn heighten our sense of the afective trace of movement imbued in the perceived musical sounds themselves.[37]

III. GETTING STARTED (NOTES TO THE INSTRUCTOR)

Room Size: Many of the movement exercises are conducted in place, so room size is not an issue. For exercises that require space, refer to Appendix A to determine room-to-class-size ratios. For some exercises, moving desks to the side of the room allows sufcient space. If you teach in a small classroom, encourage students to practice exercises that require space outside of class.

Formatting: Te presentation of exercises follows the pedagogical ordering ascribed by the spiral of learning explained earlier. Exercises are formatted similarly to those found in Bob Abramson's books Feel It! and Rhythm Games.

Companion Website: We encourage the reader to refer to the Companion Website, which demonstrates several movement exercises performed by

conservatory students. Examples that are available online are marked with the following symbol: .

Accompaniments: Keyboard improvisations are excellent accompaniments for many of the movement exercises; however, do not let an inability to improvise deter you from accompanying an exercise! Consider the following alternatives: (1) sketch out a chord progression beforehand to use as an accompaniment, which allows you to tailor the music to specifc concepts and control the level of difculty; (2) perform select pieces from the literature suggested at the end of several exercises; (3) play a recording; (4) if you are not a pianist, use your voice or a stringed, wind, or percussion instrument.

Grading of Exercises: Exercises in the book are graded by a series of asterisks: easy *, intermediate **, and advanced ***. Asterisks represent a scale of difculty based on an exercise's physical/mental demands and its level of difculty in terms of a traditional undergraduate aural skills curriculum. In general, it is often best to introduce a new concept as a simple activity and gradually increase the level of difculty (see later).

Variations: Variations are presented at the end of most exercises to provide additional challenge. You can present one or two variations in a single class or spread them out over the course of several class periods. Depending on class level, you may want to introduce a more challenging variation of an exercise frst. Variations also allow movers to experience the same concept in many ways, each yielding diferent qualities of motion and nuance.

Guided Analysis: Analytical suggestions follow many of the exercises, which is in accordance with the Dalcrozian philosophy that analysis follows experience. In other words, students are to experience the sensation of a musical idea aurally, visually, and kinesthetically frst before discussing it.

Dalcroze's rules of nuance, accentuation, and phrasing are found in Appendix B. References to these rules are included in several examples used throughout the book. We view these "rules" not as ironclad directives but rather as suggestions to promote expressive performance and score reading.

Pedagogical Tips

1. Directions: Present clear, concise directions and keep your words to a minimum. Directions are presented at the beginning of each exercise.
2. Tempos: Appropriate tempos are critical for any movement exercise. Try practicing an exercise yourself ahead of time to fnd "the window"

of suitable tempos. Assess students' abilities while accompanying an exercise by watching them carefully, and adjust the tempo accordingly. Before repeating an exercise, you could ask students if they prefer a faster or slower tempo.

3. Level of Difculty: It may take time to determine students' abilities. Begin with exercises that present a healthy challenge but do not overwhelm the students. Create exercises for success and an environment where challenges are welcome. Increase the level of difculty incrementally. For example, when teaching meter, frst have students conduct or walk the meter before asking them to conduct and walk it simultaneously.
4. Observe and Assess: Carefully observe students as they move to monitor their progress and address problems (tips on what to look and listen for are ofered in footnotes for many exercises). Remind students that it is okay if they cannot do everything asked of them. Learning a new concept is a process; encourage them to set their own goals. Be careful not to make a habit of simplifying an exercise too much or you run the risk of sinking the entire class; keep raising the level of expectation.
5. Level of Involvement: Always start with where the students are at, providing support and challenge along the way through demonstration and/or reinforcement. Gradually withdraw support as students gain command over the material to instill independence.
6. Be Inventive: Once you become familiar with the basic exercises presented in the text, feel free to invent your own version of exercises to address specifc concepts and skills you are teaching.

CHAPTER 1

Basics

When the mind of an adult is engaged in the solution of a complicated problem, his body becomes an inert mass, quite distant from his mind. To enable the body to share in the brain activity, the latter must not be permitted to absorb all the forces of life.

— Jaques- Dalcroze, 1930, 10

I. PRELIMINARY CONSIDERATIONS

Tis chapter introduces fve fundamental exercises used throughout the book and acquaints you with their basic procedures and benefts. Te movement-to-music approach provides a multisensory learning experience that engages the aural, visual, and kinesthetic sense while enhancing musical understanding and fostering mind-body connections. In the following pages, we address students and instructors; comments written specifcally for instructors are so noted. We begin by elaborating on guidelines for instructors, guidelines essential for a successful movement-to-music experience.

Physical Form (to the Instructor)

Moving to music can initially make some students feel self-conscious. For instance, when asked to walk the beat for the frst time (a good opening exercise), many move unnaturally, with little sense of ease. To follow are common problems with suggestions for how to remedy them:

1. Beginners often walk in small, stif steps. If you suggest they move freely through the space of the room, they usually relax and their movements become more expansive and fuid.

2. Students often walk in too heavy a manner. Ask them to walk lightly and buoyantly. Such images help to foster a relaxed and natural rapport between students and their bodies.
3. Students may cluster and move in the same direction, mirroring each other's actions. Direct them to move in diferent directions and explore the entire space of the room.

Students quickly learn to move with ease after assimilating these suggestions. Be careful not to overwhelm them with too many suggestions in one exercise; the classroom environment should promote confdence and freedom of expression.

Movement Tenets (to the Instructor and Students)

To ensure that movement to music is assimilated into consciousness, practice the following tenets until they become second nature:

1. Ready position: Before starting an exercise, assume the "ready position," which prepares you to move. Typically, knees are slightly bent, one leg is forward and weighted (the supported leg), the back leg is ready to move (the free leg), and spines are elongated; be alert and ready to respond.
2. Move with musicality: When you move, be engaged musically; perform the sounds with musical intent! If you hear pianissimo legato beats, then show your movements as pianissimo legato beats. To link movement to hearing, pay careful attention to degrees of time, space, energy, weight, and plasticity. As you practice these exercises, pay careful attention to nuance and musical detail, which will enhance your musicianship. You should sense and feel the sounds in the limbs of your body.
3. Strive for precision: Strive for precision in your movements. For instance, in stepping the beat, have your foot become the beat. Listen and feel for a marriage between the sound heard and the movement in your body. Te part of your body representing the sound should feel as if it is producing the sound. You are a medium of the sound; submit to its qualities. And remember, although important, precision is never an end in itself.
4. Show duration: When expressing eighths and quarters, humans usually move easily and naturally, as if "conducting" the beat. When expressing longer note values—such as half and whole notes—we tend to stop motion after a short time. As performers, we need to practice continuing motion through the duration of the note; musical spaces between and

through beats are open for expressive interpretation that can be enlivened and amplifed kinesthetically. Represent musical duration with various fow patterns, using your feet, hands, shoulders, and torsos; shape musical space through curved and straight lines, away from and toward the center of your body, up and down, forward and backward, and side to side. As Abramson notes, “Tis produces the vivid shading of durations heard in the performance of fne artists. Without these nuances, the study of duration is reduced to timing, and becomes a mechanical experience instead of an aesthetic one.”[1]

To follow are some basic ways to physically express musical duration:

- Clapping: After each clap, show the duration of a beat by moving one or both hands through space. For example, in a quarter-quarter-half-note rhythm, pulling one or both hands apart in varying directions expresses the longer duration of the half note.
- In place: Show duration with various parts of the body. For instance, a shoulder shrug, a punch by the hand, a bowing of the head, and so forth are efective indications of duration. Each gesture has its own dynamic profle and emotional response.
- Walking: Match the duration with the length of your stride, stepping longer durations with a longer stride; feel the length of the stretch in your thighs. Show duration by dragging the toe forward of the moving foot or through sweeping movements by one or both arms. Walk at diferent tempos, experimenting with ways to show duration between and through beats with your arms, hands, and feet.

Consider the following nuance rule: “Te more active the rhythm the less nuance can be applied.”[2] In general, longer durations allow for broader, more expressive movements.

Summary Tenets to Remember

- Begin an exercise in the ready position.
- Be engaged musically!
- Strive for precision and accuracy.
- Move through longer note values; represent duration through physical space.
- Faster tempos require smaller movements; slower tempos allow for bigger movements.

Overcoming Inhibitions (to the Instructor)

Most students are eager to express themselves physically; however, some are self-conscious at frst. To assuage inhibitions, it is best to begin with exercises in place and then gradually include activities that involve moving through space. (See Chapter 3, Section 2: Meter—Simple and Compound for several in-place exercises for teaching meter.)

As students become fully engaged in an exercise, they are too busy concentrating (and having fun) to feel self-conscious. Requiring concentration is one of the strengths of the approach. Students participate together and learn at their own pace, easing inhibitions. Remind students that doing an exercise is not about getting it right but is a process of experimentation to represent music physically (for additional tips for overcoming inhibitions, refer to Chapter 2).

II. FIVE FUNDAMENTAL EXERCISES (TO THE INSTRUCTOR AND STUDENTS)

In this section, we describe the characteristics and benefts of fve fundamental exercises used throughout the book. In addition, we include a few of Dalcroze's "musical rules" of nuance, accentuation, and phrasing, rules that serve as guides (not ironclad directives) to promote expressive performance and score reading (see Appendix B for a complete list). Te descriptions are general; we present more detailed explanations in later chapters on rhythm, pitch, harmony, and form. Tese exercises can enhance the teaching of musical examples from other texts and approaches. In exercise headings, a series of asterisks indicate level of difculty: * easy, ** intermediate, *** advanced.[3] Te headings also indicate whether the exercise is performed in place or needs space:

1. Quick- Reaction Exercises
2. Inhibition- Excitation Exercises
3. Interference Exercises
4. Imitation and Canon Exercises
5. Disassociation Exercises

Tese exercises develop the following skills:

a. Awakening the muscular and nervous systems
b. Facilitating mind-body connections
c. Strengthening the powers of concentration (being in the "musical now")

d. Deepening inner hearing
e. Developing multitasking capabilities (for ensemble playing)
f. Improving short- and long-term memory
g. Retaining mental calm while adapting to change
h. Developing improvisational skills
i. Increasing sensitivity to musical nuance
j. Encouraging expressive freedom

Quick- Reaction Exercises

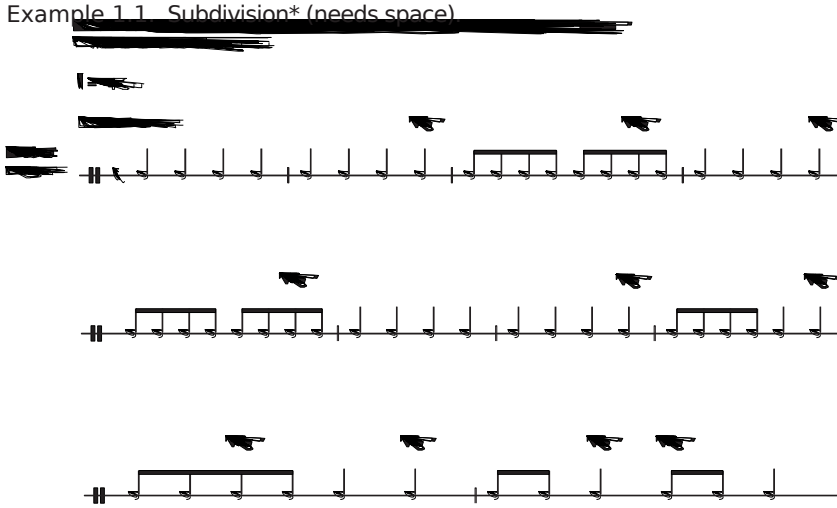
Purpose: Awakening the muscular nervous system; staying alert and strengthening the powers of concentration; adapting and responding to musical change while retaining a sense of mental calm.

How we react to unpredictability is the basis of a quick-reaction exercise.

In such an exercise, we learn to respond quickly and efortlessly to a musical change elicited by a musical or verbal cue. Listening for the unexpected cues requires us to stay focused. Tis, in turn, compels us to remain alert, which strengthens our powers of concentration. Practicing an exercise trains us to remain calm as we adapt to musical change—a skill required of any musician. Quick-reaction exercises run the gamut from simple to complex.

Exercise 1.1 is an easy movement exercise that teaches subdivision by engaging the moving body (see Example 1.1). Exercise 1.2 is a more challenging vocal exercise that teaches melodic elaboration through upper and lower neighboring fgures (see Example 1.2).[4]

Example 1.1. Subdivision* (needs space)



Exercise 1.1: Quick-Reaction Stepping Exercise* (Needs Space)

A demonstration of Exercise 1.1 is shown on the Companion Website (see Video Clip 1.1). Notice how the movers begin by walking the tactus (main beat). When they hear the instructor's cue "hip," they walk twice as fast; when they hear the cue "hop," they walk twice as slow. Te exercise can be performed in silence or to music—from the literature, composed or improvised.[5] (See Chapter 3, Section 4: Subdivision, which presents several variations that increase this exercise's level of difculty incrementally.)

To enhance musical performance for this exercise, we introduce the "rule of agogics": Following a series of faster notes, the longer note assumes more weight, as well as more time.[6] Terefore, when switching from slower to faster notes, express the gathered energy of the shorter notes by lifting the body; express the length of the following agogic by resting on bended knee; feel the weight in your legs. (See Chapter 3 for more detailed explanations of the rule of agogics in various rhythms.)

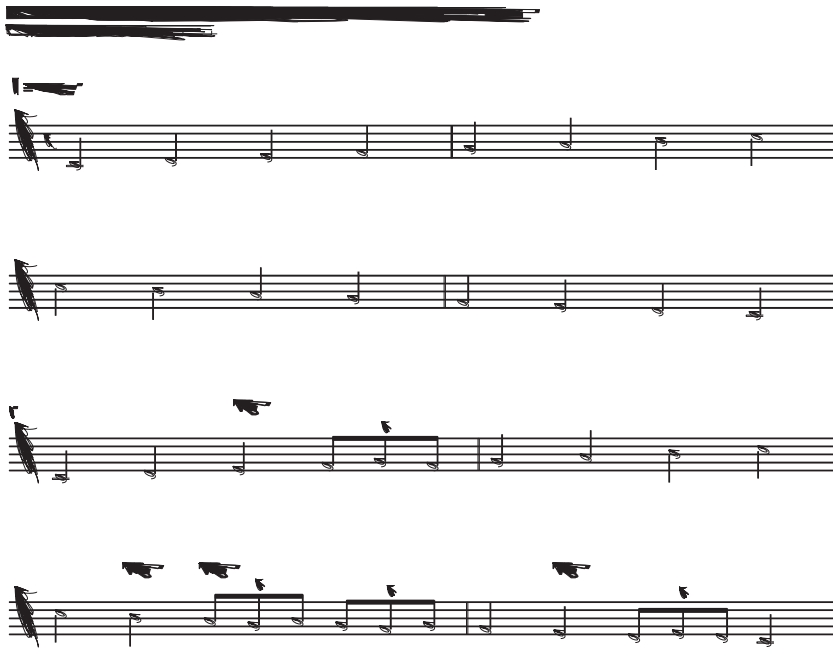
Exercise 1.2: Quick-Reaction Singing Exercise** (in Place)

In Exercise 1.2, students sing an ascending and descending major scale with added upper and lower neighbor notes, respectively. Upon the instructor's cue "hip," they elaborate the next tone with an upper neighbor; on the cue "hop," they use a lower neighbor. To enhance performance, encourage singers to consider the following "rule" (for an entire list of rules, see Appendix B; as stated previously, we view these rules only as suggestions):

- Nuance Rule #1: "All ascending melodies must be sung with a crescendo, descending melodies with a diminuendo." (Refer to chapter 4 for exceptions to this rule).[7]

Instructor's Note:

Cues: In a quick-reaction exercise, any verbal or musical cue can initiate a musical change. Decide on the cues and their associated change before beginning the exercise. For instance, in Exercise 1.1, the word "hip" signals eighth notes and "hop" quarter notes; in Exercise 1.2, the word "hip" denotes singing an upper neighbor and "hop" a lower neighbor. For a greater

Example 1.2. Neighbor notes** (in place).

rhythmic challenge, increase the rhythmic complexity by a factor of four (quarters to sixteenths) using the words “hip-hip” and “hop-hop.”[8]

Giving Cues: Te success of a quick-reaction exercise depends on the timing of the cues. Give the cue one beat before students are to initiate a change. Students need sufcient time to process the cues mentally before performing the expected reaction. For instance, in Exercise 1.1, the teacher says “hip” while students are stepping the quarter note, that is, the beat before they switch to eighth notes (see Example 1.1).

Patterns: In a quick-reaction exercise, establish and then break patterns. In Exercise 1.1, a recurring pattern of alternating measures of quarters and eighths is established and then broken in measure six (through the absence of the cue “hip”). Because of the predictability established by a set pattern, students often fail to respond correctly to a broken pattern. Unpredictability requires students to remain alert.

Inhibition and Excitation Exercises

Purpose: Shifting between states of action and inaction; staying alert and poised for action during silence and stillness; controlling varying degrees

of energy of musical performance; gauging the ebb and fow of degrees of intensifcation and relaxation.

Compared to a quick-reaction exercise, inhibition-excitation involves shifting quickly between two opposing states: action and inaction. "Inhibition" refers to an inactive muscular state, "excitation" to an active muscular state. To stop an activity is inhibition; to begin or resume one is excitation. As with quick-reaction exercises, inhibition-excitation exercises run the gamut from simple to complex.

Exercise 1.3: Simple Inhibition-Excitation Exercise* (Needs Space)

Walk to or clap the beat, stopping and starting on the designated cues "stop" and "go." Practice walking to diferent tempos; notice that maintaining your balance is more difcult when you stop suddenly at faster speeds. Be aware of which muscles are used to redistribute energy, weight, and balance and which control your body as it begins and ends a motion.[9]

Te exercise can be performed in silence or accompanied by any type of music—from the literature, composed or improvised. Stop and start the accompaniment with the movers.

Inhibition-excitation exercises attune us to the precise measure of silence and its potential. We sometimes overlook or shortchange rests because we naturally pay more attention to states of sound and action. Silence is not devoid of action, but is rather a vibrant musical space teeming with interpretive meaning. Dalcroze asserts, "While sound stops, it is transferred into the region of internal hearing and continues to vibrate in the organism of the auditor. A silence can say more than a discourse."[10]

Trough inhibition-excitation exercises, we perceive the depth of meaning in inactive states. Even though not physically engaged during silence, the musician must express silence as "expressive sound." (In Chapter 3, Section 5: Rests and Pauses, we will discover the nuances of interpretative silence.)[11]

Interference Exercises

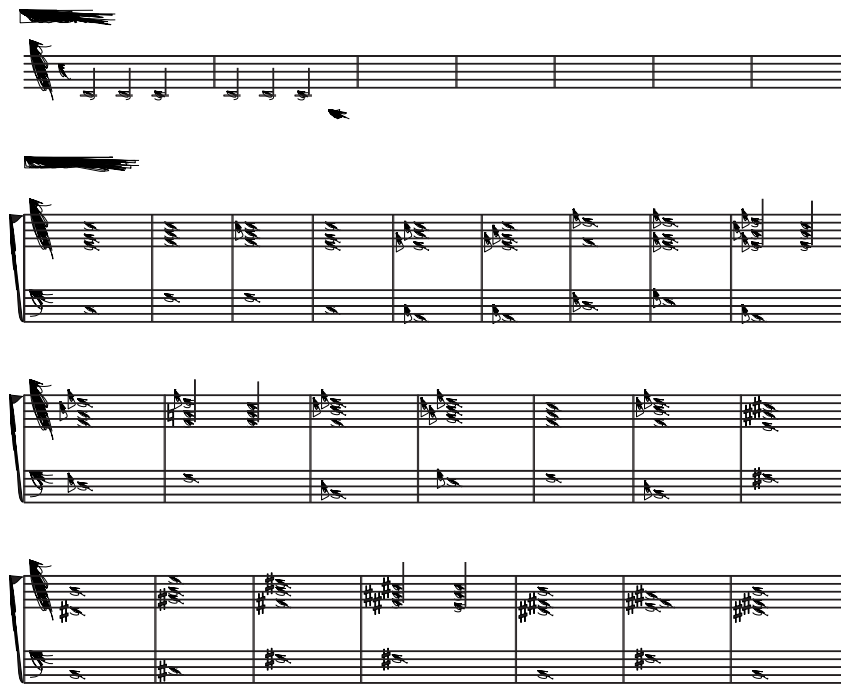
Purpose: Developing inner hearing and strengthening concentration.

Interference exercises teach us to stay focused while confronting distractions. Tey also develop inner hearing, concentration, and "cooperative independence" (the ability to focus on one's part while listening to other parts).[12] Following are examples of two basic interference

exercises. Te frst develops tonal retention, the second rhythmic precision.

Exercise 1.4: Tonal Retention Exercise*** (in Place)

Ask students to sing middle C (on solfège or numbers) in a short-short-long rhythm while playing chord progressions that gradually move away from C major. Modulate, preferably a half step below or above (see Example 1.3, the notated harmonic progression). Stop playing and ask students to sing the original C; then play it on the keyboard. On the frst try, most singers are surprised to discover that they are no longer singing the original point of departure. In this exercise, the accompanying tonal shift interferes with their sense of tonal hierarchy. Hearing through a distraction deepens the skills of inner hearing, concentration, and, in this case, tonal retention. Over time such exercises develop relative pitch. Te exercises can be made more difficult by singing silently in your mind's ear. (See Chapter 4, Section 2: Tonal Centering, Retention, and Recall for other interference exercises that develop tonal retention and modulation at graduated degrees of difculty.)[13]

Example 1.3. Tonal retention*** (in place).

Exercise 1.5: Rhythmic Precision Exercise** (Needs Space)

Walk the beat in silence or to any type of music. On a designated cue, stop for eight counts and converse with another participant; resume on the next count of eight and repeat the cycle. Conversing while counting requires participants to maintain a consistent rhythmical count against a distraction. Resume walking on the next count of eight; think and feel the pulse. This exercise strengthens rhythmic precision as it develops the skill of processing two opposing rhythmic streams.[14]

Imitation and Canon Exercises

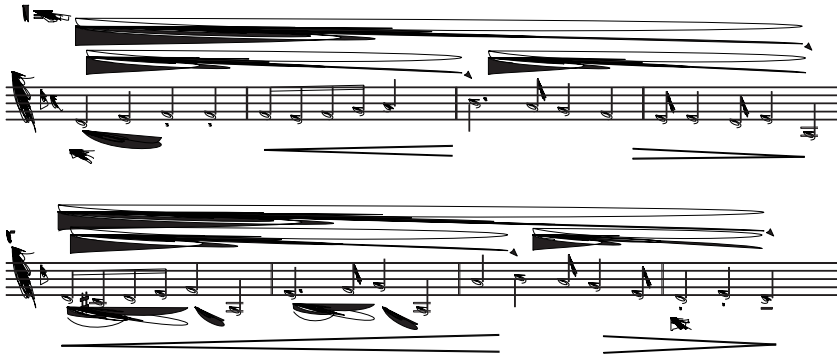
Purpose: Performing one part while listening to another, an essential skill for ensemble playing; developing musical concentrations and short- and long- term memory.

In a canon exercise, participants express rhythms and melodies through bodily motions (such as walking, singing, and clapping). After the instructor plays the initial melodic or rhythmic pattern, participants physically imitate that pattern as the next pattern is played, and so forth. Te resulting cycle involves increasingly more difcult patterns.

Exercise 1.6.a and 1.6.b: Imitation and Canon Exercise** (Needs Space)

See Companion Website: Video Clips 1.6a, 1.6b, and 1.6c. Video Clips 1.6a and 1.6b show a basic canon exercise in two parts. In Video Clip 1.6a, participants imitate one-bar melodic fragments; the imitation exercise serves as a simple warm-up that is subsequently converted into a canon, which is more challenging as shown in Video Clip 1.6b. (Play the two clips back to back.) Video Clip 1.6c shows the same canon exercise with movers who are more experienced at showing duration in their upper torso and arms. See the music played for imitation and canon in Example 1.4.[15]

Te following “musical rules” can be considered to enhance musical performance:

Example 1.4. Imitation and canon** (needs space).

- Nuance Rule #3: “A prolonged note in an ascending passage receives a crescendo.” Note in Video Clip 1.6c the expressive gesturing of the half note A in measure two, which receives a “physical crescendo” through space as it moves up to the focal point B-fat with straight and curved movements of varying intensity in diferent directions and postural balances.
- Nuance Rule #1: “All ascending melodies must be sung with a crescendo, descending melodies with a diminuendo.” Notice how movers depict the overall dynamic shape of each phrase, moving to and from their climactic focal points in measures three and seven (indicated by the arrows above the staf in Example 1.6).
- Phrasing Rule #9: “Break after the first note, or beat, of a measure if the following note constitutes a wide melodic skip.” This rule applies to the wide leaps between measures five to six and seven to eight.
- Phrasing Rule #11: “With few exceptions, take a breath after the notes of a phrase that has the feeling of repose (tonic) or semirepose (dominant or subdominant).”
- Accentuation Rule #5: “Accent strongly the highest note of a descending rhythmic group, even when it occurs on a weak beat.” Tis rule applies to the B-fat highpoint in measure seven, which is the highest note before falling to the fnal cadence.[16]

Canon exercises develop short- and long-term memory. Participants engage in a cycle of hearing, memorizing, and executing one rhythm while simultaneously committing the next to memory. Canons teach the art of performing one part while carefully listening to another, an essential skill

for ensemble playing. Te canon shown in Example 1.4 is simple, featuring basic rhythms that are given one measure at a time. By increasing the rhythmic complexity and the number of bars in a segment, the exercise becomes more difcult. Canons may also express specifc rhythms that contrast with one another, for example, dotted or syncopated rhythms against straight rhythms (see the examples in Chapter 3). For canon exercises, use composed music or create your own examples to control the level of difculty and kinds of rhythms used. Canon is an efective strategy for teaching rhythmic and melodic patterns at any level in the aural skills classroom.

Disassociation Exercises

Purpose: Negotiating two or more opposing actions simultaneously with ease; developing vocal and limb autonomy and multitasking skills; especially useful for teaching cross-rhythms, syncopation, and polymeters.

Exercise 1.7: Disassociation*** (Needs Space, but Can Be Done in Place)

Video Clip 1.7 shows a three-part disassociation exercise performed with both arms and feet. The participant is conducting a duple meter in her left hand and a triple meter in her right hand while stepping a two-bar hypermeter in her feet (she could also step the main pulse in place).

Performing opposing parts simultaneously allows us to experience the dynamic interplay of two or more parts; we experience their resultant interactions within the intimate space of our own body. Disassociation exercises are especially useful for training conductors to communicate two radically different impressions simultaneously, such as a gentle subito in one arm against a violent fortissimo in the other. These exercises also develop what Dalcroze refers to as polydynamics—the ability for the organism to experience two emotional states at once. As Bachmann points out, "The advantage ... is that they accustom the organism to experience simultaneously impressions of various kinds."[17] One can imagine countless possibilities, for instance, singing triplets while clapping duplets, singing a scale fortissimo while conducting pianissimo or the reverse, and so on.[18]

To conclude, we encourage you to view the six exercises presented in this chapter as basic models for creating your own exercises to enhance the teaching of specifc rhythmic, melodic, harmonic, and formal concepts. We recommend referring back to the basic suggestions outlined for each exercise as you apply them to teach the concepts presented throughout the book.

CHAPTER 2

Warm- Ups

OVERVIEW (TO THE INSTRUCTOR)

Te following warm-up exercises serve as efective introductions for an aural skills curriculum that integrates movement into the classroom or for a typical eurhythmics course. Warm-ups are especially useful during the frst two weeks of a course to help students overcome inhibitions, build trust, and promote social interaction. Spend about fve to ten minutes on an exercise depending on class engagement and time.

Warm- Up 2a: Name Game

Purpose: An excellent class opener on the frst day for meeting classmates, easing inhibitions, and promoting social integration; develops multitasking skills, long-term memory, and concentration; introduces a physical representation of beat, pattern, and canon.[1]

Formation: Stand in a circle facing one another about two to three feet apart (ideally in groups of eight to twelve).

Directions: Toss a hacky sack randomly to someone in the circle and say your name as you toss. Te exercise is done when everyone has had a chance to say his or her name and toss and catch the hacky sack at least once.

VARIATION A: Establish a tempo and create a pattern in which everyone tosses and catches the hacky sack, but only once per person; repeat the pattern two to three times. To successfully repeat the pattern requires remembering who threw the hacky sack to you and to whom you threw it, which develops long-term memory. Everyone can chant the words "and—catch, and—catch" as they pass and catch. Bend your knees while saying "catch" (the crusis) to establish a steady beat.

VARIATION B: Circulate a second hacky sack to toss and catch two to four beats after the frst one has been tossed to create a canon.

VARIATION C: Introduce a third element into the mix—a small pufer (or Nerf ball)—but don't catch it! Let it hit you frst, and then pick it up and toss it to your person. Tis third element trains you to multitask while maintaining the established pulse.

VARIATION D: Add a fourth element to the mix. For example, pass a tennis ball around the circle clockwise or counterclockwise.

Instructor's Note

Optional: Try incorporating the dynamic shape of a musical phrase into a single cycle of tossing, by adding dynamics and rubato for an efective arc of tension and release. Tis is a good game to return to when studying musical phrase.

Optional Guided Analysis for Warm-Up 2a: After the game is complete, discuss the physical representation of a tripartite beat: the toss—anacrusis; the catch—crusis; the rebound—metacrusis (see the defnition of tripartite beat in Chapter 3). Also note the physical representation of a musical canon, that is, the pattern of two hacky sacks circulating at staggered time intervals.

Warm- Up 2b: High- Five

Purpose: Letting go of inhibitions; promoting social integration; negotiating a sense of time and space; feeling the beat; multitasking—maintaining a steady pulse while coordinating other movements.[2]

Formation: Place yourself randomly about the room.

Directions: Walk to the music you hear (improvised or composed), exploring all areas of the room. As you walk, assume the stylistic attitudes of the music you hear. Connect your foot with the foor precisely on the beat; carefully follow any changes you hear in tempo and dynamics.

VARIATION A: Count in groups of eight and change directions on beat eight to establish a new path.

VARIATION B: Continue walking to the music counting in groups of eight; meet up with another person to high-fve precisely on beat eight. Show the attitude of the music in your facial expression and high-fve gesture with your partner. Work at negotiating the time and space necessary to arrive at someone on time; if you do not meet up with anyone, high-fve the air.

VARIATION C: High-fve one of your neighbors on the count of four. Alternate high-fves on counts of eight and four, or other combinations of beats (this is an excellent exercise to return to later for teaching changing and uneven meters; see Chapter 3).

VARIATION D: High-fve a diferent person until you have high-fved everyone in the room only once without repeating. Resume the pattern.

Instructor's Note

Tis is an efective class opener to ease inhibitions and promote social integration. Change up the style, dynamics, and tempos of the music you improvise or have composed.

Warm-Up 2c: Tossing Blind

Purpose: Awakening the kinesthetic sense; developing a sense of spatial orientation without relying on visual perception.

Directions: Toss a basket of tennis balls (or hacky sacks) out into the room; each person is to take one ball. Close your eyes and begin tossing the ball from one hand to the other to the given beat. Practice “feeling” the distance of the ball as it travels back and forth from each hand. Gradually widen the distance/length of your two hands as you pass the ball. Visually imagine the arc of the ball as it travels in the air to your hands.

VARIATION A: Tossing blindly with your partner—Stand in front of your partner approximately two to fve feet apart. Briefy practice bouncing and catching one tennis ball with your partner. Ten close your eyes and repeat. Tis exercise trains you to rely solely on your kinesthetic sense. We learn to gauge the ball’s voyage to and from one another through our sense of time, space, and energy. Try moving closer or farther apart from your partner. Work out solutions to “feel” the ball’s movement without seeing it. Tis is a challenging but rewarding exercise to master.

Optional Guided Analysis for Warm-Up 2c: Discuss the challenges of having to rely only on your kinesthetic sense to perform this exercise. What aspects of the kinesthetic sense helped guide you through this exercise?

Warm-Up 2d: Ball of Energy

Purpose: Exploring plasticity and phononemesis.

Phononemesis defned: Phono (means sound) and mimesis (means movement).

Formation: Stand in a circle facing one another about one to two feet apart.

Directions: Imagine having a ball of energy in your hands. Manipulate the ball and demonstrate some of its dynamic plastic possibilities. For example, imagine the ball is light and fragile, or heavy and cumbersome, or flled with helium and foating away. Pass the ball around. Give each person a chance to manipulate the ball for approximately ten to twenty seconds. Change the shape and size of the ball by molding it, stretching it, bouncing it, and so on. Pass the ball to the next person until everyone has had a chance to work with it.[3]

VARIATION A: During the next round, everyone in the group vocalizes a sound to accompany the ball's dynamic quality of movement in each participant's hands. Carefully listen to the collective sounds of everyone's vocalizations to match the ball's dynamic quality of movement. Pay particular attention to the sonic changes in timing (tempo), timbre, and energy (dynamics) needed to represent the ball's physical changes. Vary your vocalizations accordingly and strive for a marriage between sound and movement; imagine the collective sound of your vocalizations emanating from the movement itself.

Optional Guided Analysis for Warm-Up 2d: Discuss the notion of phononemesis: Is there is a sound for every motion and a motion for every sound? Can gestures become sounds and sounds become gestures?

Warm-Up 2e: Making Shapes— Plasticity

Purpose: Encouraging kinesthetic awareness; developing a movement vocabulary.

Formation: Stand in a circle facing one another about two to three feet apart.

Directions: Stand with feet slightly apart, shoulder width apart. Make circles with diferent parts of your body—frst with your head, then shoulders, elbows, wrists, fngers, waist, hips, knees, ankles, and toes. Make small and large rotations forward and backward. Draw circles in the air with each part of the body. Imitate each other's movements.[4]

Warm-Up 2f: Mirroring

Purpose: Mirroring is a classic eurhythmics exercise that trains us to respond to cues, teaches us to lead and follow, builds trust, and promotes social integration.

Formation: Stand in front of a partner approximately two feet away. Designate a leader (A) and a follower (B).

Directions: Ask the leader to start improvising movements as he or she wishes; the follower is to mirror the leader's movements in time. On the instructor's cue, "change," the leader and follower are to switch roles without hesitation. Tis exercise can be done in silence or to music that elicits various attitudes and gestures. Keep the following rules in mind throughout the exercise: (1) partners are to maintain eye contact, (2) partners are not to speak, and (3) partners are to perform movements slow enough to be mirrored. Encourage followers to emulate the leader's movements with rhythmic and expressive precision.[5]

VARIATION A: Partners mirror each other's gestures for eight counts and then switch. Establish a comfortable tempo and maintain the tempo by counting silently as you perform.

VARIATION B: Quick reaction—Change from leader to follower in various combinations of counts, such as counts of six, four, two, then two, four, six, and so on.

VARIATION C: One person leads an entire group to mirror.

Instructor's Note

Students may laugh or chatter at frst out of self-consciousness, but they will eventually get into the moment as they shed inhibitions. To change things up, ask students to change partners. Te progression from mirroring in pairs to an entire group (Variation C) makes for a gentle advancement from a more intimate one-on-one experience to that of a more public arena.

Warm-Up 2g: Follows

Purpose: Developing acute listening skills; strengthening the powers of concentration (being in the "musical now"); coordinating movement with sound

Formation: Place yourselves randomly around the room.

Directions: Movers are to follow what the music is doing (composed or improvised) by physically representing the various musical elements—tempo, dynamics, articulation, pattern, phrase—in their movements. Movers can perform in place with isolated body parts or travel through space with the whole body. "Te follow," as Abramson points out, "forces the student to respond to the slightest nuance of the instructor's performance … by appropriate movement changes. It is useful in producing fexibility."[6] Movers travel with the music, responding "in the moment" to the character of the music and its various changes, for instance, the winding down of a phrase ending or changes in articulation from a fuid legato to a plucked staccato.

Warm-Up 2h: Motion = [E] motion

Purpose: Exploring the associations between our bodily motions and emotions; examining how emotions "live within" our bodily motions, and how bodily motions elicit emotions.

Formation: Stand in a circle facing one another.

Directions: Slowly raise your shoulders up to the ceiling and keep them there; start to breathe with quick shallow breaths; open your eyes as wide as possible; drop your jaw to the foor.

Ask everyone to describe what kind of emotions they are experiencing. Answers may include panic, terror, fright, and so forth. Tis is an example of how emotions are linked to the physical signals experienced in your body.

Let's try another: Quietly reproduce the vocal sounds of crying. Make your face, shoulders, arms, and hands gesture as they would if you were crying. What emotions are you now experiencing? Answers may include sadness, grief, hopelessness, loss, and so forth. Again, these emotions were triggered by the signals experienced in the physical gestures themselves.[7]

Instructor's Note

Have the class perform this exercise frst with eyes closed, which allows the group to determine their emotional responses based solely on their personal physical response. Perform the exercise again with eyes open to include the visual witnessing of other participants in the assessing of emotional response (kinesthetic empathy).[8]

Warm-Up 2i: Sick Puppy

Purpose: Understanding how emotions afect motions and how motions afect emotions.

Formation: Stand in a circle facing one another.

Directions: Imagine petting a sick puppy. As you pet the puppy, consciously consider the quality before, during, and after each stroke you make. Now imagine petting a healthy puppy eager to play. Make note of the qualitative diference in your gestures as you play with the puppy compared to consoling it. Repeat each scenario back to back, and note how a change of emotion elicits a change in gesture, and how a change in gesture elicits a change of emotion.[9]

Guided Analysis for Warm-Up 2i: Compare the diferences in timing, space, energy, weight, balance, and plasticity of the gestures associated with each scenario. For instance, consoling gestures are slow, small, quiet, light, even, sustained, stable, centered, and smooth; playful gestures are quick, large, sporadic, lively, unstable, chaotic, and loopy.

Warm-Up 2j: Walking Attitudes

Purpose: Exploring the inextricable correlation between our motions and emotions; assuaging inhibitions; promoting expressive freedom, improvisation, and spontaneity.

Formation: Stand in a large circle about two to three feet apart from one another.

Directions: Write several attitudes on the board, for instance, dignified, arrogant, excited, giddy, sad, smug, shy, passionate, frightened, and suspicious. Ask each participant to take turns walking across the center of the circle assuming one of the attitudes listed. Everyone is to guess which attitude is being expressed by the walker. Afterward, describe the walker's quality of movement using the time + space + energy + weight + balance + plasticity diagram to explain your answers (see the Introduction for an explanation of the diagram). Discuss how the attitude could have been expressed more convincingly. Take turns walking each other's attitudes with greater precision and expressivity.

VARIATION A: As the student moves across the circle, the class accompanies the movement with improvised vocalizations, in other words, vocalizations the gesture would make if the physical gesture itself were speaking.

VARIATION B: Students take turns improvising music on their instruments that evokes diferent attitudes; movers walk the attitude of the music being played.

VARIATION C: Participants walk freely around the room assuming the characters of diferent prescribed emotional moods. For example, ask them to walk with excitement, with a swagger, timidly, or sneakily. Create short scenarios, such as stepping past a sleeping baby, moving down an aisle of a regal coronation, and so forth. Ask everyone to assume the character of select movers' walks that were particularly convincing.

VARIATION D: Quick reaction—Te movers switch from one afect to another every eight to ten seconds, assuming a new attitude with all of the changes required to project that afect. Tis exercise trains us to change instantly from one afective state to another as required in our musical interpretations.

Instructor's Note

In this exercise, the attitudes are considered the primary impetus for eliciting movement and sound; the attitude (emotion) guides the quality of walking (motion), which in turn inspires the improvisatory sounds.

Optional Guided Analysis for Warm-Up 2j: Examine the diferences in qualitative motion the mover assumed to depict a specifc attitude. Use

adjectives and components of the time + space + energy + weight + balance + plasticity diagram to explain your observations: compare the diference in the overall timing (tempo) of the walker's gait: quick, sluggish, and so on; the overall space traversed; the degree of energy and weight (dynamics) exerted; the overall balance, that is, the mover's posture, carriage, and position of head, spine, and shoulders; and the movement's overall plasticity, that is, the dynamic shape of the mover's lines: angular, rounded, deliberate, jerky, fowing, and so on.[10]

CHAPTER 3

Rhythm

> Musical rhythm is not a mere mental afair; it is physical in essence.
> — Dalcroze, 1921, 31

OVERVIEW (TO THE INSTRUCTOR AND STUDENTS)

Tis chapter is divided into two parts: Part I introduces basic rhythmic concepts and terminology used throughout the text, as well as fundamental techniques for vocalizing, clapping and stepping rhythms. Pedagogical tips for the instructor are included at the end. Part II presents movement exercises to enhance the undergraduate aural skills curriculum with a more embodied, holistic approach to learning rhythm. Exercises are organized into thirteen rhythmic subjects typically taught in a three- to four-semester aural skills sequence, and presented in a graded though fexible order, allowing the instructor to choose individual exercises in any sequence to develop a specifc rhythmic concept or skill.

I: BASIC RHYTHMIC CONCEPTS AND TERMINOLOGY (TO THE INSTRUCTOR AND STUDENTS)

Time-Point Rhythm versus Gestural Rhythm
Beat
Meter
Rhythmic Nuance
Defnition of Accents and Poetic Feet

Time-Point Rhythm versus Gestural Rhythm

We begin by drawing a distinction between time- point rhythm (the timing of rhythmic events) and gestural rhythm (the dynamic fow between and through time points). Time-point rhythm (errhythmy) marks the attack of each sound or movement, for example, the moment your foot touches the foor when taking a step. Gestural rhythm (eurhythmy), on the other hand, describes all the varieties of movement that fow to, through, and from the time point.

Moving the body allows us to shape in expressive ways the musical "spaces" between and through beats, spaces enlivened kinesthetically by straight- and curved-fow paths, changes in direction, and varying degrees of energy, weight, speed, and postural balance.[1] Graybill elaborates:

> While [the] concept of rhythm as a neutral series of attack points and durations may be appropriate in certain contexts, it does not accord very well with our experience of rhythm in the fullest sense. When we respond to rhythm as listeners or feel a rhythm as performers, we experience something vital and dynamic—a fow of energy through time … characterized by a dynamic interplay of ebb and fow, of intensifcation and relaxation.[2]

Timing and gestural fow are equally essential for good musicianship, but as Abramson cautions, "Timing is mechanical, rhythm is living movement. Both are necessary, but do not confuse the two."[3] In sum, time-point rhythm defnes when you perform the rhythm; gestural rhythm defnes how you perform the rhythm.

Point to Remember: Time-point rhythm (errhythmy) marks the beginning (attack point) of each sound or movement. Gestural rhythm (eurhythmy) captures all the varieties of fow through time.

Beat

Dalcroze conceptualizes beat as a durational event consisting of three phases: *anacrusis*— the preparation of beat; *crusis*— the attack or precise point of contact (from the Greek crusoic, which means to strike); and *metacrusis*— the follow-through resulting from energy exerted by the crusis (see Figure 3.1). In a series of successive beats, the metacrusis eventually evolves into a resulting anacrusis in preparation for the following crusis.

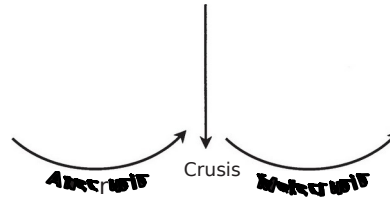


Figure 3.1. Te tripartite beat.

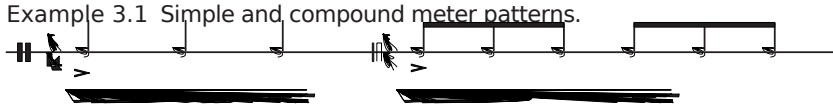
Engaging the moving body magnifes the three phases of beat, thereby developing our aural acuity to its subtle qualities, or, as Caldwell puts it, "the beat's voyage." For instance, the act of stepping involves the following movements: lifting the foot (the anacrusis), contacting the foor (the crusis), and lifting the foot in preparation for the next beat (the metacrusis). Te tripartite beat is a "particle of energy" that entails the elements of time, space, energy, weight, balance, and plasticity.[4]

Defnition of Beat: A tripartite event: anacrusis—the preparation, the duration before the strike; crusis—the strike, the precise point of contact; metacrusis—the aftermath, the rebound from energy exerted by the crusis.

Meter

Dalcroze's tripartite concept of beat is transferred to the deeper (secondary) level of meter to explain the qualitative diferences between metric beats: crusis: the accented "downbeat," or "strong beat"; metacrusis: the
afterbeat that absorbs the energy of the previous crusis; and anacrusis: the "upbeat" or preparatory beat that leads into the following crusis (see Example 3.1). Meters are presented as patterned series of anacrusic, crusic, and metacrusic beats in simple and compound time signatures. For example, triple meter is viewed as a recurring pattern of crusic, metacrusic, and anacrusic beats, and duple meter as a recurring pattern of crusic and anacrusic beats.[5]

Example 3.1 Simple and compound meter patterns.



Rhythmic Nuance

Te interaction between surface rhythms and established metric patterns is elaborated using the anacrusic, crusic, and metacrusic terminology. Troughout this chapter, specifc movement exercises highlight the subtle rhythmic nuances that evolve through the interaction of surface rhythms and metric patterns. For example, walking to metric beats while clapping syncopated rhythms allows students to experience this interaction within the personal space of their own bodies, or, in Dalcroze's words, "to experience—live— them organically."[6]

In addition, Dalcroze's "rules of nuance, phrasing, and accentuation" (infuenced by eighteenth-century theorist Mathis Lussy's "rules of expression") are applied to select musical examples (see Appendix B for a complete list).[7] As mentioned previously, we view these rules not as directives, but rather as suggestions to draw out nuances intrinsic in a given musical context and to promote expressive performance and score reading. Diacritical marks are used to illustrate these rules in the score, but ultimately the goal is to learn to interpret them without the aid of written markings.

Definitions of Accents and Poetic Feet

To follow are defnitions of frequently encountered accents and poetic feet used throughout the text. Tis list is by no means exhaustive, and we encourage the reader to explore other theoretical and performance treatises that address other types of accents and poetic feet.

Agogic: A long note preceded by a shorter note. More precisely, an agogic is an unexpected emphasis that creates the sensation of a "giving in" of weight on generally less weighted metric beats. Te agogic usually takes on more weight and more time. As Abramson suggests, "Te note isn't hit or punched, it is pressed."[8]

Amphibrach: Short— long— short.

Anapest: Short— short— long.

Dactyl: Long— short— short.

Focal point: A point (phenomenal accent) at the musical surface that motion moves to and/or away from.[9]

Metrical accent: a relatively strong beat in a metrical context.

Pathetic accent (accent pathetique): A dynamic stress or agogic creating tension against the established underlying metric or rhythmic pattern.

Phenomenal accent: An accent that "gives emphasis or stress to a moment in the musical fow … such as sforzandi, sudden changes in dynamics or timbre, long notes, leaps … and so forth."[10]

Structural accents: "Accent caused by melodic/harmonic points of gravity in a phrase or section—especially by the cadence, the goal of tonal motion."[11]

Marcato: A strong, somewhat forced accent, often from a loud attack.

Portato: Slightly accented and moderately detached; also known as an articulated legato, slurred staccato, semi staccato, or mezzo staccato.

Tactus: Te primary metrical pulse you tap your foot to. "Te tactus establishes the continuity of metrical motion: without it, no sense of meter is possible."[12]

Tenuto: A slight accent held throughout the note's full value, giving an impression of a heavy or weighted sound. Tenutos are often used to ofset natural accents within a meter.

Expressing Gestural Rhythms: Vocalizing, Clapping, and Stepping Rhythms

Basic Techniques (to the Instructor and Students)

Exercises in this chapter involve vocalizing, clapping, stepping, and conducting rhythms in many combinations (these are by no means exhaustive). Te key is to express the same rhythm in a variety of ways using different parts of your body, for each physical expression exhibits a diferent gestural profle and character. You will discover that some rhythms are better suited for some parts of the body than others. Gesturing rhythms enlivens your kinesthetic sense, creating a deeper kinesthetic well from which to draw upon later to enhance artistic expression.

To follow are basic techniques for (1) vocalizing, (2) clapping, and (3) stepping gestural rhythms with musical expression. Refer to these suggestions as you work through exercises presented in the chapter.

1. Vocalizing Gestural Rhythms

We recommend vocalizing rhythms at frst with a hard "t," "d," or "b" because of their clear attack points. Te syllable "yah," for example, is effective for communicating a softer attack. Be inventive—experiment with diferent vowel sounds to capture subtle diferences in the rhythmic

nuances you hear. For example, the syllables, “ta,” “tya,” and “tchya” each have diferent attacks ranging from sudden and direct to pressed and drawn.

Many well-known methodologies use prescribed syllables for learning rhythms, such as Kodály’s Ta, Ti-Ti, Ta-o system and Hofman, Pelto, and White’s Ta- ka- di- mi system,[13] among others. We believe prescribed syllables are highly efective for developing durational accuracy but are limiting in gestural scope and nuance. To demonstrate, try vocalizing the opening anapest rhythm of Mozart’s Symphony No. 40 in G minor, frst with the Kodaly syllables “ti-ti-ta” and then with the less standardized syllables “ya-de-dum.” Note the subtle diference in expressive nuance between these two approaches. Ultimately, let the beat’s attack, span, and release, as well as the degree of fow or arrest between beats, dictate your choice of syllables. Syllables will reveal themselves as you work to fnesse the right infection and should fall naturally of the tongue to communicate gestural fow.[14]

Point to Remember: Strive to capture a rhythm’s subtle nuances and gestural fow in your vocalized syllables.

Instructor’s Note

If a student’s vocalization lacks precision, have him or her return to vocalizing rhythms in a monotone voice using syllables with a hard attack. Clapping or tapping the meter while vocalizing the rhythm also helps keep the beat. Once beats are frmly intact, students can reapply vocalized infections to the rhythm.

2. Clapping Gestural Rhythms

Clap with musicality, which means clap in diferent places and in diferent ways! For instance, experiment with varying timbral spectrums ranging from cupped to entirely fattened palms, or try using just your fngertips in a brush, dab, or fick. Also, note how changes in direction exhibit different dynamic shapes. For instance, brushing down “gives into” gravity (a crusic downbeat), whereas brushing up pulls away from gravity (an anacrusic “lift”). Experiment by clapping in diferent directions applying varying degrees of energy, weight, and plasticity.

Point to Remember: Clap beats with musicality in diferent ways and places, paying careful attention to timing, space, energy, weight, and plasticity.

3. Stepping Gestural Rhythms

Revisit Chapter 1, Physical Form and Movement Tenets to review techniques for stepping rhythms. Techniques for stepping specifc rhythms are addressed throughout the chapter.

A Final Note

Strive to maintain a steady underlying pulse while expressing gestural infections. Tere is a tendency at frst to lose the metric pulse when incorporating the dynamic ebb and fow of a gestural rhythm. Your goal is to strike a balance between the competing demands of a frm metrical pulse and supple gestural fow.

Point to Remember: Strive to integrate both metrical precision and varieties of dynamic fow into your physical gestures.

Pedagogical Tips for Teaching Rhythm Exercises (to the Instructor)

Inner Clocks: Remind students to turn on their "inner clocks" before moving to establish the tempo just as they would in a performance (see Exercise 3.1.4 on Dalcroze's notion of the inner clock). Encourage students to initiate their movement as if joining in with the music already in progress.

Observe and assess students as they move: Do the students' movements appear natural? If not, maybe the tempo is too fast or slow. Are their movements rhythmically precise? For instance, are students stepping precisely with the beat? Are their movements depicting the expressive character of the music? Does the students' physical use of time, space, energy, weight, and plasticity match that of the music's?

Provide prompt feedback: If necessary, ask for adjustments before repeating an activity.

Pacing of Exercises: Pace the presentation of concepts in a manner that ensures students absorb one new piece of information at a time. Does the exercise need to be repeated more than once? Vary the exercise to avoid boredom (see appended variations to exercises). Provide new and interesting challenges one step at a time. Some exercises can be done in a single class, whereas others may need reinforcement over several class periods. If an exercise appears too challenging, slow down the tempo, break it down, or hold of and return to it at a later time.

II: RHYTHMIC SUBJECTS (TO THE INSTRUCTOR)

Te following movement exercises are categorized into thirteen rhythmic subjects typically taught in an undergraduate aural skills sequence. Bear in mind these are general categories in which more than one rhythmic subject is often addressed. Most exercises follow the pedagogical ordering ascribed by the spiral of learning (see Introduction). With all exercises, start at the students' level and refer to the variations at the end of the exercises to increase the level of challenge. Present one or more variations in a single class or spread them out throughout the course of the semester. Te ordering of rhythmic subjects and exercises is fexible, allowing you to hand-select specifc exercises to enhance a particular subject being covered in class. Remember, the exercises we present are just the tip of the iceberg. Once acquainted with the techniques presented here, invent your own exercises and variations. We recommend revisiting the Introduction: Pedagogical Tips and Chapter 1, Physical Form and Movement Tenets.

Chapter 3 Exercises

1. Beat, Pulse, and Tempo
2. Meter—Simple and Compound
3. Augmentation—by Factors of Two, Tree, and Four
4. Subdivision—by Factors of Two, Tree, and Four
5. Rests and Pauses—Te Expression of Silence
6. Dotted Rhythms
7. Syncopation
8. Gestural Rhythmic Patterns
9. Cross-Rhythms and Polyrhythms
10. Changing Meter
11. Uneven Meters
12. Additive Rhythms
13. Polymeters

1. Beat, Pulse, and Tempo

Beat

> Beats are the "basic living matter" of musical rhythm
> — Abramson, 1994, 39

Exercise 3.1.1: Stepping the Beat

Purpose: Dalcroze recognized walking as one of the most natural ways we experience beat in everyday life. As he explains, "A regular gait furnishes us with a perfect model of measure and the division of time into equal portions."[15] Compared to clapping or vocalizing, walking presents a more robust realization of beat in that it engages the entire body. Abramson elaborates:

> A true kinesthetic response involves the transfer of weight felt in the body during walking. Tis weight transfer originates and carries through the preparation, attack, and prolongation of the walking step and is created by motion in the foot, ankle, knee, and hip joints and in the movements in the muscles of the trunk, thigh, calf, and foot.… [Te] attack, prolongation and decay, and renewal of beats should be carefully studied.[16]

Formation: Place yourselves randomly about the room or in a circle facing clockwise. Assume the ready position.

Directions: Begin walking the beat to the music you hear—composed or improvised by the instructor at the keyboard or from a recording or a drumbeat. (Please see Instructor's Note later.) Make sure to refect the affective character of the music in the physical character of your step. Pay close attention to the sensations associated with each phase of the beat, and imagine your feet initiating the sound:

- Anacrusis—Te lifting of the foot as it prepares each beat; feel how it pulls up against gravity.
- Crusis—Te precise point at which the foot makes contact with the foor; feel how the foot falls to the foor.
- Metacrusis—Te release of the foot; feel how it rebounds from the crusis and transforms into the preparation for the next beat.

Point to Remember: Your steps are to become the beats.

VARIATION A: Convert into a quick-reaction exercise—Stand in a circle facing clockwise, and walk to the music. On the instructor's designated

cue (verbal or musical), walk backwards; on the same cue, resume walking forward. As you switch directions from forward to backward, note the shifts in your postural balance and redistribution of weight.

VARIATION B: Te instructor adds a second cue to the mix. On the second cue, step out of the circle and walk throughout the room. On the same cue, move back into the circle and continue walking clockwise.

VARIATION C: When the instructor's music rests, stop stepping and clap the beat. When the music resumes, begin stepping the beat again. (Tis variation can be stepped in a circle or throughout the room.)

VARIATION D: When the instructor's music rests, stop stepping and show the beat somewhere else in your body; choose a gesture that represents the character of the music just heard. When the music resumes, begin stepping again.

VARIATION E: Walk throughout the room to the instructor's music. When you hear a single line (monophony), walk alone; when you hear a two-part counterpoint, meet up with a partner and walk side by side; when you hear a three-part counterpoint, walk in trios. Strive to walk precisely in time with each other. (Tis is also a good exercise for studying texture.)

Instructor's Note

Accompaniments for Exercise 3.1.1: Stepping the Beat Play composed or improvised music that varies in tempo, dynamics, articulation, and afect, play recordings of diferent genres ranging from ffteen to thirty seconds in length, or play a drum using diferent hand techniques. Remind students to connect their foot with the foor precisely on the crusis and to assume the character of the beat in their gait, which develops rhythmic precision, acute listening skills, and expressive nuance.

For suggestions on refning students' stepping technique, review Chapter 1: Physical Form and Movement Tenets.

Accompaniments for Variations C and D When performing accompaniments with rests, employ musical cues such as ritards and/ or diminuendos to communicate when your music is about to stop. Establish and break patterns of starting and stopping to keep students alert.

For other stepping exercises, see Exercise 3.1.4: Stepping Inner and External Pulses (another good introductory exercise for stepping the beat); Exercise 3.1.5: Te Tempo-Circle Game; and Exercise 3.2.3: Stepping

Simple Meter. Also see Chapter 6, Exercise 6.1: Phrase Boundaries and Exercise 6:2: Phrase as Directed Motion.

Exercise 3.1.2: The Traveling Beat: Circle Clapping, Passing, or Drumming

dent, or

Te traveling beat is a classic ensemble exercise in which participants clap, drum, or pass a ball (the beat) to one another in a circle.

Purpose: Internalizing and maintaining a steady beat within a group, an essential skill for good ensemble playing; creating a visual/aural/tactile image of the three phases of the beat; staying alert.

Formation: Stand in groups of fve to seven (odd numbers are often better) in a circle facing inward, positioned close enough to pass a ball to one another (if using a ball).

Directions for passing the ball: Clap, drum, or pass a ball around the circle in time to the instructor's music—composed or improvised—or to a recording. When passing a ball, place the ball in the next person's palm precisely on the crusis (a tactile impression of the beat's energy). Bend your knees and say "and pass" to maintain a steady pulse. Be attentive to the subtle derivations in time, space, and energy you hear in the music and pass your beats accordingly. Direct the beat's voyage and make eye contact with the person to whom you are passing the beat. Pass the beat with precision and musical expression.

Instructor's Note

Play music that deliberately fuctuates in tempo, dynamics, and articulation.

VARIATION A: Convert into a quick-reaction exercise—On the instructor's cue "change," students reverse the beat's direction from clockwise to

counterclockwise and vice versa. Te person about to pass the beat is the one who must change direction.

VARIATION B: Clap or drum the beat to diferent people across the circle. Look at the person to whom you are about to pass the beat. Te person who receives the beat then looks and passes it on to someone else. You must remain alert and look to the person who has the ball to receive and pass the beat on time.

Tempo and Dynamic Nuance

Te next set of variations trains you to control fne gradations of energy necessary for producing a musically afecting change in tempo and/or dynamics. Performing an electrifying *accelerando*, subito piano, or gradual *crescendo* requires you to regulate the desired degree of energy expended (excitation) or retained (inhibition) in the production of sound. Circle clap or drum the following variations.

VARIATION C: Inhibition-excitation exercise—Tempo nuance—*Accelerando* and ritardando. Perform circle beats with accelerandi and ritardandi. First, determine where in the circle the *accelerando* or ritardando will begin and for how many beats. Start with short-range gradations, which are easier to negotiate, and then graduate to longer ones. For example, begin with a four-count *accelerando* followed by a four-count ritardando, and then increase the number to six counts. Mix and match accelerandi and ritardandi of various counts, which forces us to continually readjust to gradations of diferent lengths. Producing an efective tempo fuctuation among several people requires acute listening skills.

VARIATION D: Inhibition-excitation exercise—Dynamic nuance—*Crescendo* and *decrescendo*. Perform circle beats with measured waves of crescendi and decrescendi. Pay special attention to what Graybill refers to as the "crescendo's rhythm," that is, its length and degree of change in intensifcation.[17] First, determine where in the circle the *crescendo* or de-*crescendo* will begin and for how many beats. Tis is an excellent exercise for learning to control a change in dynamics (energy) while maintaining a steady beat. Te tendency, of course, is to rush when getting louder (excitation) and drag when getting softer (inhibition). Strive to not let a change in dynamic energy change your tempo. Begin with short-range gradations, for example, a four-count *crescendo* followed by a four-count *decrescendo*, and then increase to six counts. Mix and match diferent predetermined lengths. As you develop control, determine a specifc range

of intensifcation, for instance, piano to mezzo forte or forte, and so on. Finessing a predetermined change in dynamics among several people requires acute listening skills.

VARIATION E: Tempo and dynamic nuance combined—Combine Variations C and D by pairing a measured change in tempo with a change in dynamics. Begin by combining two states of excitation, for instance, an accelerando paired with a crescendo, and a ritardando with a decrescendo, which feels natural. Then try pairing two opposing states (i.e., a state of excitation with a state of inhibition), for instance, an accelerando paired with a decrescendo, and a ritardando with a crescendo, both of which feel less natural and more challenging to perform effectively.

Plasticity: Quality of Beat— Articulation

> Articulation is that element which transfgures music
> — Keller, 1973

Te following studies in articulation attune us to myriad ways we can attack, sustain, stop, or connect sound—that is, a beat's plasticity. Plasticity entails a beat's timing, direction, degree of energy, weight, and balance, all of which, combined, create nuance (i.e., shadings). Magnifying these aspects of beat in movement develops our sense of articulatory refnement. Abramson explains:

> All performing artists must respond to two basic questions before they begin to perform: 1) What is the most efective tempo for what I need to communicate? And, 2) What are the necessary beat qualities that I must bring to that tempo to give a complete picture (i.e. mood, lighting, ... personality).[18]

Exercise 3.1.3a: Body Beats—Soma Rhythms

Purpose: Becoming kinesthetically sensitive to the variety of beats inherent in our bodies; a visceral immediate experience of beat and its infnite shadings.

Formation: Stand in a circle facing one another.

Directions: Demonstrate many ways to express beat using your body as an instrument, such as bends, blinks, tongue clicks, and so forth. Perform your beats for one another, paying close attention to diferences in their dynamic profles.

Exercise 3.1.3b: Everyday Actions as Beats—Life Rhythms

Purpose: Re-enacting daily activities heightens our awareness to the infnite anacrusic-crusic-metacrusic profles structuring many of our physical actions. Each action presents its own dynamic profle, which enlivens our kinesthetic imagination by drawing attention to subtle details that otherwise go unnoticed. Conscious re-enactments deepen our kinesthetic pool, creating a more robust and refned selection of images from which to draw upon to enhance musical performance.

Directions: Take turns thinking of and performing for one another imaginary actions from everyday life that exhibit the anacrusic-crusic-metacrusic profle, such as shoveling snow, pulling down a shade, ficking a bread crumb of the counter, and so on. Discuss diferences in each action's dynamic profle.

Swinging a Bat as Beat: Swinging an imaginary bat is a useful introductory real-life action to analyze. Imagine a baseball bat in your hands. Assume a batter's stance and practice swinging. Pull the bat behind your shoulder in preparation (often referred to as the preanacrusis). Start the swing: anacrusis. Imagine hitting the ball: the crusis. Follow through with your arms feeling the release of energy: the metacrusis. With each swing, be attentive to the way you prepare, swing, and release your bat. Note the shift in weight from your back to front foot as you swing, the exertion in your muscles as you hit the ball, and the relaxed aftermath that follows.

VARIATION A: Practice swinging at diferent speeds. For instance, practice bunting (lightly) versus attempting to hit a homerun. Feel the diferences in time, space, energy, weight, and balance. Pay special attention to the anacrusis needed to efectively prepare each type of hit and compare their diferences.

Notes on the Anacrusis

Of the three phases of beats, the anacrusis is that which initiates all human actions. Try performing a physical act, such as walking, lifting a box, or hugging a friend without an anacrusis. It's virtually impossible. Likewise, all musical performance must begin with an efective anacrusis. Te quality of anacrusis is critical for setting the desired quality of sound into motion.

Refective Analysis for Exercise 3.1.3b: Assignment: Make a list of many anacrusic-crusic-metacrusic actions found in life and discuss diferences in their dynamic profles.

Laban's Efort-Shape Analysis

To understand the parameters of the kinesthetic sense and their relationship to musical motion, many eurhythmics practitioners turn to aspects of the Efort-Shape analysis set forth by movement specialist Rudolf von Laban. Laban developed his method in Europe in the 1920s, and it has since been used universally in the feld of dance and other kinetic disciplines as a means to analyze both the mechanical and interpretive aspects of human movement. As Laban specialist Martha Davis notes, "While movement can be described as a series of actions, e.g., leaping, sitting, making a fst, scratching one's head, etc., Efort-Shape deals with how the action is done, e.g., lightly, quickly, sinuously."[19]

In general, there are three basic aspects to the system, (1) efort, (2) shape, and (3) spatial paths. Efort consists of four basic parameters: time, space, force, and fow. Each parameter is analyzed on a continuum of binary opposites:

Timing: slow to quick or sustained to sudden
Space: indirect to direct
Force: light to strong
Flow: free to bound

Shape roughly groups into four basic parameters based on dimension and direction:

Shape fow:	shrinking	growing		
Horizontal:	out to side	across	widening	narrowing
Vertical:	rising	sinking		
Sagittal:	advancing	retreating		

Spatial paths qualify the three-dimensional "sculpting" of our movements through space, such as:

angular
curve
linear
straight

Laban's Efort-Shape analysis allows us to analyze the parameters that make up our physical actions. For instance, imagine punching someone you are perhaps not very fond of. A punch is quick, strong, direct, bound, straight, advancing, and aggressive. Now imagine caressing a sick child who is very dear to you. A caress is sustained, slow, less direct than a punch, light, gentle, controlled, curved, and consoling. Note how your feelings and thoughts initiate your imagined movements and, in turn, how your movements evoke feelings and thoughts. Invent and act out your own actions, and use the Efort-Shape analysis to analyze and compare their parameters. A single movement may undergo a number of changes and variations in terms of efort, shape, and paths, as well as a complex succession of diferent body parts. Many eurhythmics practitioners also use Efort-Shape analysis to describe the varieties of "touches" inherent in standard musical articulations,[20] such as the following:

Staccato (efort): fick, pluck
Accent: poke, dart, dig, stomp, scoop
Marcato: smack, punch, slap
Portato: press, dab, grind
Legato: foat, glide, pull

Pulse (to the Instructor and Students)

> Pulse … “the heart, the center, the life giver, the glue that holds music together.”
> — Lewis, 2005, 7

Te following exercises develop your “inner clock” (an internalized sense of pulse), your ability to sync up to an external pulse, and tempo memory and resumption.

Instructor’s Note

Pulse and tempo activities are good class openers. Variations to each exercise can be used over the course of several classes.

Exercise 3.1.4: Stepping Inner and External Pulse

Purpose: Turning on your inner clock; internalizing a steady pulse; establishing and maintaining a collective pulse; developing “perfect click.”

Percussionist Andrew C. Lewis makes a distinction between two types of pulse: external and internal. External pulse is the steady rhythms we synchronize to outside of ourselves, such as in an ensemble setting. Inner pulse is “the sensation of pulse generated within one’s own body and mind,” or what Dalcroze calls our “inner clock.” As Lewis point out, musicians can often become too reliant on outside sources—such as the metronome—at the expense of developing their inner pulse. Dalcroze believed musicians should know how to turn on and develop their inner clocks. The goal is to develop what Lewis calls “perfect click,” the ability to reference a tempo without the aid of a metronome.[21]

Formation: Place yourselves randomly about the room in the ready position.

Directions: Close your eyes and imagine walking a tempo that is natural for you. Feel the rhythm of your imagined steps in your mind's ear. Begin to lightly clap the tempo of your imagined steps in your hands. It may be diferent from your neighbors; don't change or adjust your tempo! Walk your tempo around the room, or if the room lacks space, step your tempo in place. (Optional: Set a metronome to your step to determine the speed of your tempo for future reference.) Meet up with or look at others clapping. Again, do not change your tempo. Look around the room and determine who has the fastest tempo. Assume the walk and character of the fastest tempo. Return to your original tempos. Look around the room and see who has the slowest tempo. Assume the walk and character of the slowest tempo. Return to your own tempo after having assumed those of others.

VARIATION A: Ask students to recall their collective tempo at later points in the class. Tis is an excellent activity for recalling and memorizing specifc tempos.

Tempo

Exercise 3.1.5: The Conversation Game

Purpose: Developing tempo memory and tempo resumption through an interference.

Formation: Place yourselves randomly about the room.

Directions: Refer back to Chapter 1: Exercise 1.8 for directions.

VARIATION A: Rather than conversing through measured silence, converse through unmeasured silence. On the instructor's cue (verbal or musical), resume walking precisely at the speed of the original tempo. Tis exercise trains us to remember and resume a previous tempo after an unmeasured interruption.

Exercise 3.1.6: The Tempo- Circle Game

Purpose: Developing short- and long-term memory of tempos; developing the ability to resume a previous tempo.

Directions: Walk to the music played by the instructor (approximately twenty to thirty seconds in length) at a moderato tempo that you are to remember. When you hear the instructor's cue, walk freely around the room to a diferent tempo of your choosing. Upon the instructor's cue, move back into the circle and walk clockwise precisely to the tempo of the music set earlier. Te instructor begins to play the former music again and you discover whether you remembered the previous tempo accurately.

Exercise 3.1.7: Remembering Multiple Tempos

Purpose: Developing short- and long-term "perfect click."

Directions: Listen to three diferent excerpts (ten to ffteen seconds in length) of music back to back, each representing a diferent tempo. Conduct as you listen to each excerpt. After listening to all three excerpts back to back, try to recall the tempos of the frst two excerpts by conducting or tapping the tempo from memory. Check for accuracy with a metronome.

Instructor's Note for Tempo Exercises

To teach long-term tempo memory, either remember or set metronome markings to the excerpts you perform. Later in the class, ask students to recall and snap or conduct the tempo of an excerpt performed earlier in the class. Further challenge tempo memories by asking students to recall and demonstrate the tempo of an excerpt performed the previous day.

Guided Analysis for Tempo Exercises: Listen to several recordings consecutively of the same piece performed in a wide range of tempos. Compare and discuss the strengths and weaknesses of the performed tempos.

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2. Meter— Simple and Compound

Te diference between timing and meter is the diference between motion "in place" and cyclical motions "through" space.

— Abramson, 1997, 27

Tis section introduces movement exercises for learning two-, three-, and four-beat simple and compound meters. Techniques for clapping, stepping, conducting, and stepping and conducting meter are introduced to highlight the gestural quality of individual metrical beats and the dynamic fow between and through beats.

Defnition of Meter (to the Instructor and Students)

Meter is defned as the periodic grouping of beats into larger units organized into measures. Beats become measured or "metric" when grouped into a recurring pattern of accented and unaccented beats, creating a constant pattern of movement cycles.

We conceptualize meter as a periodic event experienced within a gravitational feld—an embodied perspective shared by several theorists, including Hatten, Larsen, and Zuckerkandl. As Hatten explains, "Meter and tonality each aford analogies to gravitation or dynamic vectoral space, making possible the experience of embodied motion subject to dynamics and constraints comparable to those afecting the body in a natural environment."[22]

Meter is typically viewed as an alternating pattern of "strong-weak" or "down-up" beat patterns. Dalcroze's conception of meter—as a patterned series of crusic, metacrusic, and anacrusic beats—departs from these typical representations, providing us with a more dynamic nuanced approach. Metric beats have individual qualities and gestural functions based on their position within the gravitational feld. Refer to Examples 3.2.1 and 3.2.2 for diagrams of simple and compound meter patterns. In general, crusic beats push down into gravity and receive the most emphasis. Tere is one main crusis per measure. Although other beats may be accented, "noncrusic" beats have diferent directional functions and qualities. Metacrusic beats travel horizontally and/or diagonally from the crusis (beat two in triple meters; beats two and three in quadruple meters). Anacrusic beats pull upward against gravity, creating lift. As the fnal beat, an efective anacrusis is one that expels energy into the following crusis.[23] We refer to a single metrical unit as the normative measure.

Te important point is to move metrical beats "through space" rather than in the same place. As Abramson explains:

> If we produce four beats in one place, we would merely produce "timing." But when we move the beats in space and return to the original starting point, we produce a phrasing or rhythmic cycle of motion called meter…. Meter is like a wave that splashes on the beach, pulls back, and rebuilds for another surge. One can always tell the diference between a "timing" performance (usually a lifeless still picture) and a rhythmic performance [that] is a moving picture.

We refer to the periodic motion to and from the initial crusis as the normative metric fow.[24]

Normative Measure: Te term used to defne a meter's "neutral" crusic- metacrusic- anacrusic unit.

Normative Metric Flow: Te periodic motion to and from the initial crusis.

Simple Meter

Te following exercises demonstrate four ways to physically represent simple meter: (1) cycle clapping, (2) conducting, (3) stepping, and (4) stepping and conducting. Refer to Example 3.2.1 for all simple meter exercises.

Example 3.2.1. Simple meter patterns.

Exercise 3.2.1: Cycle Clapping Simple Meter

Purpose: Cycle clapping is an excellent method for introducing normative metrical fow.

Directions: Let us begin by comparing the diference between clapping triple meter “in place” (stationary) versus clapping “through space” (cyclical). Refer to Example 3.2.1.

First, clap a simple triple meter in front of you, placing each beat in the same location and putting more emphasis on the frst beat to mark the main pulse. Tis is an example of stationary clapping, an efective method for developing a sense of metrical timing; however, it lacks the main ingredient for sparking an afective moving performance: gestural fow!

Now try clapping the meter again, but this time, move your arms through space. First, designate an imaginary diagonal line across your body from left to right; place three equidistant points on your line to represent each metric beat. Clap the meter starting on the far left point of your line. Make sure to express the individual function of each beat in your clap. Give more energy (weight) to the opening crusis, less weight to the following metacrusis; clap the fnal anacrusis with a release of rebounding energy that lifts and arcs back to the opening crusis to resume the next cycle. Flex your knees as you clap, feeling the shift in weight from left to right.[25]

VARIATION A: Practice cycle clapping diferent fow patterns between and through metrical points placed on your imaginary line, such as bold and angular versus soft and supple. Experiment with diferent tempos, dynamics, and articulations.

VARIATION B: Cycle clap the meter to the music you hear—composed, improvised, or recorded. Strive to convey in your claps the gestural quality of metrical beats you hear in the music. Experiment with diferent tempos, dynamics, and articulation.

Instructor’s Note

If students are having trouble maintaining a steady pulse, have them return to a stationary method of clapping until the beat has been solidifed.

Both methods of clapping are useful for diferent reasons. Te object is to clap meter with a sense of metrical fow and accurate timing.

Point to Remember: Express the gestural function of each metrical beat in your clap.

Exercise 3.2.2: Conducting Simple Meter with Nuance

Conducting is another efective exercise for introducing normative metric fow. It is best to master simple metric patterns frst before introducing compound patterns. Mapping crusic, metacrusic, and anacrusic beats onto more traditional conducting patterns provides a more nuanced approach to meter.

Purpose: Experiencing the gestural qualities of beats within the gravitational feld with our arms.

Formation: Stand in a large semi- or full circle facing one another.

Conducting Tenet: Initiate all conducting patterns with a convincing anacrusis that matches the intended character of the music. Let the gathered energy of your anacrusis breathe life into the opening crusis.

Point to Remember: A musical crusis requires a musical anacrusis.

Conducting Triple Meter: We recommend starting with triple meter—a recurring pattern of crusic-metacrusic-anacrusic beats. Refer to Example 3.2.1. Begin by extending both of your arms in front of you, keeping your knees fexed. Conduct the opening crusis by pushing down with the palms of your hands; feel the weight of your arms giving into gravity. Conduct the metacrusis as a rebound from the crusis that glides across and then gathers energy for the following anacrusis. Show the anacrusis by lifting your arms up against the weight of gravity that eventually succumbs to the weight of the following crusis. As you conduct, Caldwell recommends saying the words “puush—gliiide—lift.” Make sure the infections in your voice match the gestural quality of your arms. Each beat should express its own gestural function as felt

within the gravitational field. After conducting with both arms, conduct with your right arm alone, and then conduct with your left arm alone.[26]

Conducting Common Time: A recurring pattern of crusic-metacrusic-metacrusic-anacrusic beats. Refer to Example 3.2.1. In common time, another, more active pronounced metacrusis emerges on beat three, as it gathers energy for the final anacrusis. Abramson refers to this beat as a "growing metacrusis" and suggests saying the words "down—relax—pull—up." Caldwell calls it a "stretching metacrusis" and suggests the words "push—glide—stretch—lift." The main point is to feel the functional difference between these two metacruses in common time.

Conducting Simple Duple Meter: A recurring pattern of crusic-anacrusic beats. Refer to Example 3.2.1. Practice conducting a traditional duple meter pattern while saying the word "push" as you beat down for the crusis and "lift" as you beat up for the anacrusis. Feel the rebounding energy of the crusis give way to the anacrusic preparation for the anacrusic lift on beat two.

VARIATION A: Assume different attitudes as you conduct, such as majestic, tender, joyous, and so on. Critique and analyze each other's patterns, noting any adjustments in time, space, energy, weight, and balance that could enhance the communication of your intended attitude.

VARIATION B: Inhibition-excitation exercise—Dynamic nuance: Experiment conducting simple meters employing different shades of dynamics. For instance, one measure of fortissimo followed by one measure of subito piano, or a three-measure *crescendo* followed by a three-measure *decrescendo*, and so on. Make the necessary adjustments in space, energy, weight, balance, and plasticity to communicate the shadings in dynamics you wish to communicate.

VARIATION C: Inhibition-excitation exercise—Tempo nuance: Experiment with conducting simple meters employing predetermined fluctuations in tempo. For instance, conduct a three-measure *accelerando* followed by a three-measure ritardando.

VARIATION D: Listen to a variety of short musical excerpts (ten to twenty seconds in length)—improvised, composed, or recorded and cast in a variety of different simple meters. Students determine the meter and conduct the appropriate conducting pattern with expression.

VARIATION E: Disassociation exercise—Practice conducting forte in one arm while conducting piano in the other arm, and then switch arms.

Tis is an excellent exercise for gaining limb independence—an essential skill for conductors.

VARIATION F: Disassociation exercise—Metric canons—Conduct a simple triple meter in canon between both arms, starting the second meter a beat later in one arm. Strive to preserve the gestural pattern of individual beats for each meter, that is, the crusic weight in one arm against the metacrusic rebound in the other. Tis is an extremely challenging exercise that requires much practice (not for the faint of heart!).

Exercise 3.2.3: Stepping Simple Meter

Purpose: Magnifying our sense of the normative metric fow by providing a sense of forward momentum and activating subtle shifts in balance and weight distribution.

We present directions for stepping simple triple and common time meters, and recommend starting with triple meter—a recurring pattern of crusic-metacrusic-anacrusic beats. Refer to Example 3.2.1.[27]

Formation: Stand in a circle facing clockwise or randomly about the room in the ready position.

Stepping Triple Meter: Step triple meter at a comfortable walking tempo to the instructor's music—composed or improvised—or to a drum beat, or in silence. Each metrical unit alternates in a left-right-left/right-left-right pattern. Express the gestural function of individual metrical beats in your steps. Place the most weight on the opening crusis, absorbing additional weight with slightly fexed knees; move through the metacrusis with a lighter step; lift the anacrusis onto the ball of your foot; and let the gathered momentum of the anacrusis give way to the weight of the following crusis. Te weight of the crusis should feel like a direct result of the previous anacrusis. Graybill elaborates, "Te quality of the downbeat is infuenced by the timing and character of the lift. For instance, if it occurs involuntarily at the last moment, the downbeat itself will tend to be weak and ill-defned." Te opening crusis should not feel like "a simple assertion of weight," but

rather like a "a natural consequence of the anacrusic lift immediately preceding it."[28] Feel free to change direction, turn, sway, or dip—to physically depict the qualitative diferences in metrical fow you hear in the music. Experiment with diferent tempos, dynamics, and articulation.

Stepping Common Time: Once adept at stepping triple meter, learn to step a four-beat simple meter to the instructor's music—composed or improvised—or to a drum beat. For common time, place more weight on the opening crusis than the metacrusis on beat three. Experiment with diferent applications of weight between these two beats, either highlighting or downplaying a potential midbar division.

Stepping Triple and Common Time Meters in Place: If space is limited, step the meter in place, experimenting with diferent spatial orientations to depict the gestural function of beats. For instance, show triple meter by stepping the initial crusis forward with your right foot, followed by two steps back in place with your left and right feet. Or step the pattern from side-to-side: right-left-right and then left-right-left, as in a waltz. Devise your own patterns for triple and common time meters; diferent musical contexts will inspire diferent spatial orientations and gestures.

Point to Remember: Speak the individual character of each metrical beat with your step.

Instructor's Note

When stepping meters, encourage students to take turns starting with their right or left foot, to give both sides of the body an opportunity to initiate the metric crusis.

VARIATION A: Quick reaction—Once students are adept at stepping common time, introduce phenomenal accents by asking students to accent random beats in their steps. See Preparatory Exercise 3.7a for directions.

Suggestions for Stepping Meter

- Initiate all meters with an efective anacrusis.
- Te crusis usually receives the most weight—absorb additional weight with bended knee; the heavier the crusis, the deeper the bend.
- Te crusis should feel like an inevitable consequence of the anacrusis.
- Show the anacrusis by lifting your weight onto the ball of your foot.
- Use all of nature's natural shock absorbers—ankles, knees, feet, and hips—to express gestural fuidity between and through metric beats.

Exercise 3.2.4: Stepping and Conducting Simple Meter

For all stepping and conducting exercises, we recommend using traditional conducting patterns.[29]

Purpose: Sensing the dynamic metrical fow within the entire body; developing automatic control and coordination between arms and legs.

Formation: Place yourselves randomly about the room.

Directions: Because of its symmetry, common time is a good meter to begin stepping and conducting. Step and conduct to the instructor's music—improvised or composed—or to a drumbeat, or in silence. Coordinate the gestural quality of each beat with your arms and feet. (Once adept, step and conduct triple and duple meter.) Experiment with diferent tempos, dynamics, and articulation.

VARIATION A: Disassociation exercise—Step the meter and conduct one measure with your right arm and the next measure with your left arm. Convert into a quick-reaction exercise: Begin by stepping the meter. On the instructor's cue "right," conduct with your right arm; on the cue "left," conduct with your left arm; on the cue "both," conduct with both arms. Continue stepping throughout the exercise.

VARIATION B: Refer back to Variation D of Exercise 3.2.2. Te instructor plays diferent musical excerpts cast in diferent meters and asks students to identify the meter with the appropriate stepping and conducting pattern.

Exercise 3.2.4a: Comparing Duple versus Triple Energy Shapes

Purpose: Comparing the diference between duple and triple energy shapes; switching from two to three with fuency and ease.

Directions: Comparing metrical curved versus straight lines in your arms—One reason triple and duple meters feel so diferent is because of the fundamental diference in their energy shapes. Triple elicits a curved shaped path, compared to duple's more angular straight lines. To dramatize these diferences, show triple meter by tracing large circles in the air with your arm—one cycle per measure. With each rotation, feel the upper anacrusis give way to the gravitational weight of the lower crusis. In contrast, demonstrate the binary feel of duple in a vertical straight-lined path. Compare the two meters back to back, noting their dynamic diferences.

Directions: Comparing metrical curved versus straight lines in your feet—Our stepping patterns also highlight the diference between duple and triple energy shapes. Duple (the most natural) is expressed in a symmetrical left-right or right-left walking pattern, whereas triple is an alternating left-right-left/right-left-right waltz-like pattern. Step a few measures of duple and triple back to back to compare diferences in metrical fow between these two meters.

Exercise 3.2.5: Levels of Beat—Above and Below the Tactus

Purpose: Experiencing the hierarchical depth of concurrent levels of beat; becoming aware of their individual functions within the metrical scheme.

Formation: Place yourselves randomly about the room in the ready position.

Directions: Te instructor plays music at the keyboard—improvised, composed, or a recording—that clearly exhibits diferent levels of beats above and below the tactus (see next Instructor's Note for accompaniment ideas). Students clap and/or step to the beats they hear in the music.

VARIATION A: As you step and clap the beats, meet up with someone and clap your level of beats to each other. You may be performing diferent levels, but do not change them. Experience how your diferent beat levels interact with one another. Ten try swapping levels.

VARIATION B: Show more than one level of beat concurrently as you listen to the music. For instance, in triple meter, a faster three could be shown in the hands combined with and a slower-paced one in the feet.

Instructor's Note

Accompaniments for Level of Beat Exercises To change the level of beat in improvised or composed music, consider employing and discarding subdivisions, which gives rise to faster and slower levels of beat. Many other factors also play a role in highlighting or downplaying hypermetric levels, such as durational patterns, accentuation, tempo, and so on.

Guided Analysis for Exercise 3.2.5: Play and analyze recordings of pieces that exhibit diferent varieties of the same meter. Larson cites three pieces that use three diferent types of triple meter: the Sarabande of Bach's English Suite in G minor; Chopin's Scherzo No. 4 in E major, op. 54; and the Courante of Bach's French Suite in E-fat major (BWV 815). Encourage students to "try on" diferent levels of beat in their hands and/or feet before coming to a general consensus about the most prominent level at play in a given passage. Chopin's Minute Waltz is another efective piece for analyzing levels of beat.

Exercise 3.2.6: Levels of Beat—A Four-Part Body Counterpoint

Purpose: Experiencing the dynamic interaction of concurrent levels of beat within the space of your body; coordinating multiple levels of beat while preserving their individual qualities; developing independence of limbs; deepening concentration; developing multitasking skills.

Directions: Realize three to four levels of beat simultaneously by assigning each level to a diferent part of the body. You will realize that some parts of the body are more appropriate than others for showing diferent levels of beat. For instance, to capture four levels of beat

in a simple duple meter, consider the following realization of many possibilities:

1. Realize a two-bar hypermeter by stepping every two measures.
2. Realize the crusis of each measure by patsching with one hand on your thigh.
3. Realize duple beats by tapping from left to right across your chest with your other hand.
4. Intone faster eighth-note subdivisions.

Start with one level of beat (say, your feet) and gradually add each level until all three or four are coordinated with ease and expressivity. Once adept at coordinating three to four levels of beat, practice highlighting each of their individual functions within the metrical hierarchy. Tis is a challenging task but musically rewarding. Dalcroze explains the benefts of performing simultaneous rhythms (which he refers to as polyrhythms):

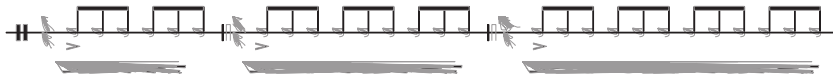
> Tere is another reason why, for the rhythmic training of man, it is necessary to exercise all his limbs, and that is—that a child is rarely born polyrhythmic. To create in him the sense of simultaneous rhythms, it is indispensable that he should be made to execute, by means of diferent limbs, movements representing diferent durations of time. Tese exercises will enable him to subdivide bars into ever shorter intervals of time. One limb, for example, may execute the quarter-values of the time, another the eighths, a third the sixteenths—or, by way of variation, one the quarter-values, another the same in syncopation—and by this means he will attain the necessary facility in dissociating movements to enable him to practice and observe polyrhythm.[30]

Coordinating multiple levels of beat in the body can be used to experience a wide variety of rhythms in a variety of combinations. Be inventive.

Compound Meter

Compound meter uses the same crusic-metacrusic-anacrusic patterns as simple meters to defne the normative measure and metrical fow of two-, three-, and four-beat meters. See Example 3.2.2.

Example 3.2.2. Compound meter patterns.



Preliminary Exercise 3.2.7: Comparing Simple versus Compound Beat Shapes

Purpose: Embodying the dynamic diference of “beat shapes” between simple and compound meters.

Let us begin by comparing the diferent “beat shapes” in simple and compound meters. In simple meter, the binary subdivision of beat produces a straight-lined shape, whereas in compound meter, the ternary division produces a curve-lined shape. Tis diference in beat shape is one reason that simple and compound meters exhibit diferent normative metrical fows.

To embody these qualitative differences, experiment with the following kinesthetic images (we assume the quarter note as the beat for simple meter and the dotted quarter note as the beat for compound meter). To capture the straight-lined path of a binary subdivision in simple meter, pretend you are working the handle of an old-fashioned pump. Pump your arm in a vertical motion, mapping the downward motion onto the first eighth and the upward motion onto the second eighth, saying, “down— up/ down— up” or counting, “1— &/ 2— &,” and so on. To capture the curved path of a ternary subdivision in compound meter, pretend you are turning a crank handle. Move your hand in a circular motion, one rotation per beat, saying, “round—&—a/ round—&—a” or counting, “1—&—a/2—&—a,” and so on. Feel the main pulse giving into gravity with each rotation. Compare these two kinesthetic images back to back to internalize their qualitative differences.

Exercise 3.2.8: Compound Duple—“Pendulums and Swings”

Purpose: Embodying the binary division of duple compound meter as one large unit.

“Pendulums”

Directions: A hallmark characteristic of compound duple is its lilting motion to and from the opening crusis (refer to Example 3.2.2). To capture this quality of motion, consider a pendulum metaphor. Swing one arm back and forth in front of you, up to the left for beat one, down to the right for beat two, saying, “press—&—a/pull—&—a.” Feel the upward swing of the crusic press give way to the following anacrusis in one continuous motion.

“Swings”

Directions: Another image that captures the binary lilt of compound duple is the swing pattern. Imagine the act of pushing a swing—push up and forward with your arms on the crusis, and pull back with your arms on the anacrusis, saying, “push— &— a/ pull— &— a,” or counting, “1— &— a/ 2—&—a,” and so on. Bend your knees on each beat. Pay special attention to the change in motion between beats, that is, the juncture at which the crusic high point gives way to the falling anacrusis—feel the momentary point of suspension just before upward energy reverts downward; again, feel the binary division from crusis to anacrusis as one larger unit.

Pendulum and swing images help to overcome a common misinterpretation associated with the performance of duple compound meters, which is to perform a single measure as two measures of a simple 3*— a misconception that results from giving the same amount of weight to both crusic and anacrusic beats. Doing so stultifes the characteristic to-and-fro lilt that distinguishes compound from simple meter.[31]

Three Other Ways to Physically Represent Meter in Place

Here are three other efective ways to represent meter in place for instructors' teaching in small classrooms.

1. Chest tapping: Mark metrical beats across your chest with your fngertips from left to right. For example, tap duple meters (simple or compound) from your left to right shoulder; tap triple meters (simple or compound) in three movements: left—middle—right; resume each cycle by arcing your arm and hand back to the starting point on your left. (Marking beats is also useful for keeping the meter while taking dictation.) VARIATION: Tap crusic beats with an open hand and other beats with fngertips.[32]
2. Side patsching: Mark metrical beats by patsching your hand upward along the side of your body from thigh to hip. Resume each cycle by arcing your arm back down to the opening crusis. Tis vertical representation magnifes the sensation of gravitational weight giving into the following crusis. (Patsching meter is also an efective method for learning changing meter.)
3. Swing patterns: Swing patterns are particularly useful for beating time in place, for keeping time while taking rhythmic dictation, and for beating uneven and changing meter patterns (see Sections 9 and 10 of this chapter). Compared to traditional conducting patterns, swing patterns represent the crusis as an upward motion and the anacrusis as a downward motion. Te best way to learn swing patterns is by observing them.

See Companion Website, Video Clips 3.1 through 3.4 for demonstrations of swing patterns for two-, three-, four-, and fve-beat simple and compound meters. In addition, refer to the following suggestions.[33]

Video Clip 3.1: Duple Swing Pattern (for 2$, 6*, and 2@meters)

Crusis (beat one): Swing both arms up; bend your knees using your leg muscles to aid in the upward swing. Anacrusis (beat two): Swing both arms down and back; bend your knees as you swing down. Count as you swing out loud or silently. Pay particular attention to the change in motion between beats, that is, the juncture at which the crusic high point gives way to the falling anacrusis—feel the momentary point of suspension just before upward energy reverts downward.

Video Clip 3.2: Triple Swing Pattern (for 3$, 9*, and 3@meters)

Crusis (beat one): Swing both arms up (bend your knees). Metacrusis (beat two): Loop your left and right arms out to your sides. Anacrusis (beat three): Swing down and back. Count as you swing out loud or silently.

Video Clip 3.3: Quadruple Swing Pattern (for 4$, 12*, and 4@meters)

Crusis (beat one): Swing both arms up (bend your knees). Metacrusis (beats two and three): Trace a sideways fgure-eight across your body looping down and up to the left and then down and up to the right. Anacrusis (beat four): Swing down and back. Say "up-left-right-back" when frst learning this pattern.

Video Clip 3.4: Quintuple Swing Pattern (for 5$, 5*, and 5@meters)

For an even pattern of five: Crusis (beat one): Swing both arms up. Metacrusis (beats two and three): Trace a sideways figure-eight from left to right across your body. Metacrusis (beat four): Loop your left and right arms out to each side. Anacrusis (beat five): Swing down and back.

Instructor's Note

Teaching Three, Four-, and Five-Beat Swing Patterns to Students

Introduce three-, four-, and fve-beat swing patterns to students with your back to the class to avoid confusion about the direction of sideways loops. Even if you were to say "right" or "left," students tend to mirror the directions they see rather than hear.

3. Augmentation—by Factors of Two, Three, and Four

Introduction (to the Instructor and Students)

We begin by examining the expansion of longer durations in simple meter; realize that durations must not simply be counted but shown through space. Showing duration sensitizes us to its dynamic profle, that is, the ebbs and fow of intensity. As Graybill notes, "Any duration longer than the prevailing beat value will have at least some gestural signifcance."[34] Two main types of exercises are featured: (1) single-line exercises—clapping, stepping, and vocalizing, and (2) body counterpoint exercises—experiencing the dynamic interaction of augmented rhythms and meter between diferent limbs.

Suggestions for Expressing Duration

Refer back to Part I of this chapter, Suggestions for Expressing Gestural Rhythms, and Chapter 1, Movement Tenets and Basic Ways to Physically Express Musical Duration.

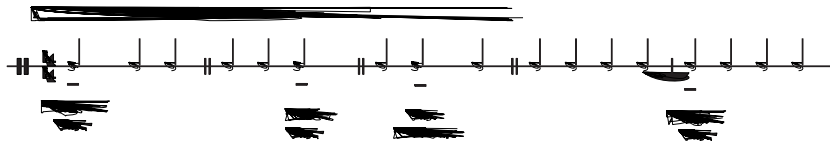
Point to Remember: Do not simply count longer durations—show their gestural expansion through space. Te longer the duration, the more room there is for interpretive movement.

Analysis of the Interaction of Half Notes in Simple Meter

To demonstrate the dynamic interaction between longer durations and the normative metric fow, let us begin by analyzing and performing half-note patterns in common time as shown in Example 3.3.1. For our purposes, we assume the quarter note as the beat, but other note values could also serve as the beat.

Directions: Rhythms A through D can be performed as single lines in a variety of ways: vocalizing, clapping, or stepping (through space or in place). Perform several repetitions of each pattern, paying careful attention to each of their gestural shapes. As you perform, count out loud or silently in your mind's ear, or vocalize standardized syllables or invent your own.

Example 3.3.1. Half-note rhythms in common time.



Movement/ Analysis for Performing Single- Line Rhythms A– D

Rhythm A: Tis long-short-short (dactyl) rhythm works in accordance with the meter. Te longer duration expands through the metacrusis and adds more mass to the opening crusis, giving more defnition to the normative metric cycle.

Clapping Rhythm A: Clap the opening half note by pulling one or both hands apart through space followed by two lighter taps; give more lift to the fnal anacrusis.

Stepping Rhythm A: Perform the half note with a longer stride; absorb the weighted crusis with bended knee; drag the toe of your back leg forward or just the leg to show duration through beat two. Return to a normal stride for beats three and four.

Rhythm B: Tis short-short-long (anapest) rhythm creates an agogic on beat three that expands through the anacrusis, creating the efect of a midbar downbeat that the performer can either emphasize or downplay.

To review, an agogic accent is defned as a longer note preceded by a shorter note. Agogics often provide an unexpected emphasis, creating the sensation of a "giving in" of weight on generally less weighted beats. Abramson elaborates, "Something special happens when a long note is preceded by shorter notes.... After short notes, a longer note will take more weight as well as more time.... Te long note is not hit or punched, but pressed."[35]

Clapping Rhythm B: Clap the frst two beats, placing more lift on the second beat to prepare for the following agogic, which should be pressed.

Stepping Rhythm B: Perform beat three with a longer stride; press into the anacrusic lift with bended knee to suppress it, or lift up to enliven it. To highlight the recessive closing efects of this rhythm, step backward onto beat three.

Rhythm C: Tis short-long-short (amphibrach) rhythm creates a syncopated agogic that works in opposition to the meter. Here the weight of a longer duration commencing on the gentle metacrusis creates a rub between the meter and surface rhythm. Compared to the frst two rhythms, this pattern generates more tension, in that the expansion smoothes over the more defned third beat. To reinforce its syncopated afect, accent and press down through the expansion to emphasize the underlying beat, or experiment with other envelopes.

- Accentuation Rule 2: Accent the frst note of a group that falls on a weak beat when the preceding notes each take up a beat throughout the measure.

Clapping Rhythm C: Clap the opening quarter with an upward brush; press into the agogic half note; tap the metacrusic rebound.

Stepping Rhythm C: Perform the half note with a longer stride; press into beat three with bended knee to intensify the resistance, or back of of it.

Rhythm D: An over-the-bar tie—from anacrusis to crusis—elicits a duration with increased "pull power," delivering a more dramatic efect than the previous durational patterns. As Abramson notes:

> In the romantic period, composers would frequently tie from the anacrusis to the crusis to add not only more weight but to pull the weight across the bar line. When performed with the correct amount of pull and weight, this is a very romantic way of expressing longing, passion, grief, and sorrow.[36]

Feel the expansion through the tie.

- Accentuation Rule #1: Accent strongly the last note of a measure if it is tied over to the frst beat of the following measure.

Clapping Rhythm D: Press into the tied quarter with additional weight and timing to emphasize the underlying beat and its potentially longing afects.

Stepping Rhythm D: Perform the tied quarter with a longer stride; press into the held beat with bended knee to intensify the resistance, or back of of it.

Instructor's Note

It is common for students to lose focus after the attack of a long-held note. Remind them to remain mentally and physically engaged throughout the duration and to express the rhythm's gestural expansion in their movement.

Once students are adept at vocalizing, clapping, and/or stepping several measures of each rhythm with musicality, combine rhythms into longer patterns and analyze their dynamic interactions.

Refer to Section 8 for other efective exercises for instilling, reading, and dictating augmented rhythms. In particular, see Exercise 3.8.1: Ensemble Rhythm Reading, Exercise 3.8.2: Complementary Rhythm, and Exercise 3.8.3: Growing Measures. Canons are also excellent for learning augmented rhythms; see Chapter 1: Exercises 1.6a and 1.6b. Create canons that pit longer durations against shorter ones in diferent patterns.

Exercise 3.3.1: Body Counterpoints for Augmented Rhythms

Purpose: Experiencing the dynamic expansion of surface durations against the established meter within the body.

Once students are adept at performing single-line augmented rhythms, we recommend introducing any of the following body-counterpoint methods: (1) Clap the rhythm and step the meter, (2) step the rhythm and clap the meter, and (3) step the rhythm and conduct the meter. See the following guidelines for each method:

1. Clapping Rhythms and Stepping Meter

Directions: Begin by stepping a few measures of simple meter to establish the pulse, and then overlay a rhythmic pattern above it in your hands. Practice several iterations of each rhythm until fuent. Refer to Example 3.3.1. Ten combine patterns, such as two measures of Rhythm A (dactyl) followed by one measure of Rhythm B (anapest), and so on. Add dotted half notes and whole notes to the mix. Count out loud or silently, or vocalize the rhythm on a standard or neutral syllable as you step and clap. Experiment with diferent tempos, dynamics, and articulations.

2. Stepping Rhythms and Clapping Meter

Directions: Once adept at clapping the rhythm and stepping meter, try the reverse. Step the rhythm and clap the meter, which is more challenging.

3. Stepping Rhythms and Conducting

Directions: Stepping the rhythm and conducting the meter is more challenging than the previous two methods. First, conduct and step series of half notes and whole notes in common time to coordinate the expansion of longer durations with the meter. Once adept, conduct and step rhythmic patterns featuring half, dotted half, and whole notes in simple meters. Remember to show duration with a longer stride, and to absorb additional weight with bended knee. Experiment with diferent tempos, dynamics, and articulations.

VARIATION A: Quick-reaction exercise—Students begin by conducting and stepping quarter notes in a common time to music played by the instructor—composed or improvised—or in silence. Students are to count out loud or silently while performing this exercise. On the instructor's cue "hop," students begin stepping half notes; on the cue "hip," they resume stepping quarter notes. Once adept at switching

from quarters to half notes, the instructor adds a third cue, “hap,” to prompt whole notes.

Suggestions for Stepping Longer Durations

- Perform longer durations with a longer stride; feel the stretch in your thigh.
- Absorb additional weight with bended knee; the greater the mass, the deeper the bend is.
- Drag the toe of your back leg forward or bring the leg forward.
- Show duration with other parts of your body (arms, shoulders, hands, head, and so on).

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4. Subdivision—by Factors of Two, Three, and Four

Introduction (to the Instructor and Students)

In this section, we present techniques for performing subdivisions with expressive nuance in simple and compound meters. We begin by addressing subdivisions in simple meter—eighths, triplets, and sixteenths—followed by subdivisions in compound meter. Tree types of exercises are featured: (1) single-line exercises—clapping, stepping, and vocalizing; (2) ensemble-counterpoint exercises—to solidify ratios of 2:1, 3:1, and 4:1 between the instructor and class, a partner, or between two groups; and (3) body-counterpoint exercises—to experience ratios of 2:1, 3:1, and 4:1 between diferent limbs and/or the voice. In addition, the interaction of eighth notes in simple meters is analyzed to demonstrate a subdivision’s dynamic infuence on the normative metrical fow. Subdividing beats into two or more parts increases rhythmic activity, creating a special kind of anacrusic lift and agogic goal that will be explained.

Preparatory Exercise 3.4.1: Comparing Subdivisions

Purpose: A good introductory exercise for experiencing the relational changes in time, space, energy, and weight necessary to perform subdivisions with ease and musicality.

Formation: Stand in a large circle or semicircle facing one another.

Directions: Students begin by clapping one measure of quarter notes in common time to establish the beat, then clapping one measure each of the following note values: eighths, triplets, sixteenths, and quintuplets—in other words, clap a series of subdivisions that increase by factors of two, three, four, and fve. Make the necessary adjustments in time, space, energy, and weight to perform each subdivision with ease and accuracy—the faster you go and the smaller the movement, the lighter the mass is. Re-engage larger muscle groups for longer durations—the slower you go, the more time you have for larger movement and greater mass.

Point to Remember: Te faster the subdivision, the smaller the movement is, and the lighter the mass is.

Subdivision by a Factor of Two: Eighth Notes—Two in One

Preparatory Exercise 3.4.2: Stepping Eighths—“Lift and Agogic”

Purpose: Learning the relational changes in time, space, energy, weight, and balance required to step in and out of subdivisions with musicality and ease.

Directions: Stepping subdivisions demonstrates more vividly than clapping the need for a lift in weight and an agogic note long enough to absorb discharged momentum—the goal. To prove this point, step three to four measures of a quarter–two-eighths–two eighths pattern in triple meter and then stop. Notice how the momentum generated by the faster eighth notes most likely caused you to involuntarily take an extra step forward—the needed goal![37]

Now step the pattern again, paying attention to the adjustments in space, energy, weight, and balance you need to move faster with ease—that is, a lift in body weight, a shorter stride (we recommend stepping on the balls of your feet), and a slight forward tilt of your upper body. Also note the holding back and redistributing of weight required to land on the final goal with ease; absorb additional weight with bended knee.

Point to Remember: A longer note (agogic) following a shorter note often serves as a goal.

Exercise 3.4.3: Stepping Twice as Fast and Twice as Slow

Purpose: Mentally and physically adjusting to the modifcations in balance, weight, and momentum when moving in and out of a subdivision, and retaining a sense of mental calm during abrupt rhythmic changes.

Directions: See Chapter 1: Exercise 1.1 for directions.

VARIATION A: Students walk the quarter notes in a circle, keeping an equal distance between one another. On the instructor's cue "hip," students walk twice as fast. On the cue "hop," they walk twice as slow. Add another command: On the instructor's cue "change," students turn and walk in the opposite direction; that is, if walking clockwise, walk counterclockwise, and vice versa. Students have to stay focused to avoid bunching up or breaking up the circle.

VARIATION B: On the instructor's cue "hip," students stop walking quarter notes and clap eighth notes; on the cue "back," they resume walking quarter notes. On the instructor's cue "hop," students stop walking quarter notes and clap half notes; on the cue "back," they resume walking quarter notes.

VARIATION C: Conduct and step rhythms twice as fast and twice as slow, which is more challenging.

Instructor's Note

Tese quick-reaction exercises can be performed using a variety of cues and combinations of movements that include walking and/or clapping diferent note values. Establish and then break patterns to keep students from going on "automatic pilot."

Suggestions for Stepping Subdivisions

- When moving into a subdivision, lift your body weight and tilt your upper body slightly forward.
- Step subdivisions with a shortened stride (we recommend stepping on the balls of your feet); the faster the subdivision, the shorter the stride is.

Techniques for Clapping Eighth Notes with Musicality

We present three techniques for highlighting the duple division of eighth notes. Begin by experimenting with the following techniques outside a metrical context. Count out loud or silently as you clap, or intone standardized syllables or create your own.

1. Pump your forearms down and up for each pair of eighth notes; that is, clap down for the frst eighth and up for the second, placing more emphasis on the frst eighth. Now, try the reverse, and note the dynamic diference.
2. Clap eighth notes from left to right, stressing the crusic eighth on the left.
3. Te touch-brush technique: Abramson suggests the following "touch-brush" technique from India: In the palm of your right hand, touch downward with your left-hand fngertips and then brush up and away with the back of your fngertips, placing more emphasis on the downward touch.[38] For faster tempos, use the front of your fngertips for both the touch and brush; for even faster tempos, tap in the palm of your hand with just your fngertips.

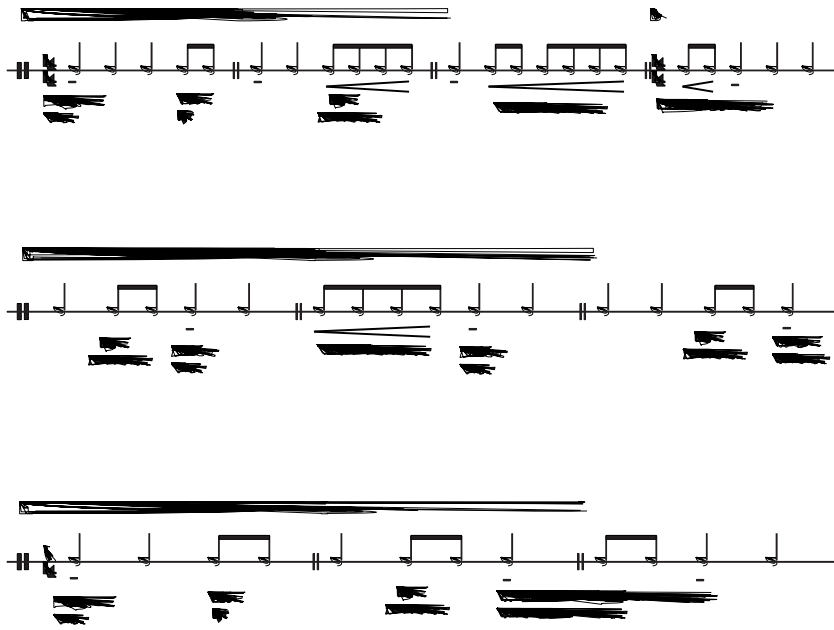
Point to Remember: Express the duple division of eighth notes in your claps with musicality.

Once adept at clapping eighth notes outside a metrical context, cast them in simple meters (revisit Cycle Clapping in Section 2: Meter—Simple

and Compound). Practice in duple, triple, and common time. Te challenge is to express the duple division of eighths within the larger context of the crusis-metacrusis-anacrusis metrical pattern. In other words, each pair of eighth notes should be nuanced diferently based on their metrical location. Experiment with diferent tempos, dynamic levels, and articulations.

Analysis of the Interaction of Eighth Notes and Simple Meter

To demonstrate the dynamic interaction between subdivisions and meter, we analyze eighth-note rhythmic patterns in simple common and triple and meters (see Example 3.4.1).[39] As with augmented rhythms, some subdivided rhythms align with and reinforce the meter, whereas others present confict. Subdivisions modify the normal crusis, metacrusis, and anacrusis qualities, depending on where they occur in the normative measure. Te faster activity of subdivided beats (into two or more parts) creates a unique quality of lift or anacrusis, even when they occur on crusic or metacrusic beats.

Example 3.4.1. Eighth- note rhythms.

Directions: Step and analyze the eighth-note rhythm patterns shown in Example 3.4.1. If space is limited, clap or vocalize the rhythms. To maintain the beat as you vocalize the rhythms, conduct or tap the meter on your chest. Perform several measures of the same rhythm, paying special attention to its inherent gestural nuances. Experiment with diferent tempos, dynamics, and articulations. Eventually, combine patterns into rhythms two or more measures in length. Once adept at stepping single-line patterns, step the rhythm and clap or conduct the meter, which is more challenging.

Guided Movement/ Analysis of Rhythms A– J

Rhythm A: Eighth notes on beat four reinforce the normative metric fow by creating more lift on the anacrusis, and subsequently additional weight on the opening crusis. To illustrate this rhythm's reinforcing efects, frst step one measure of quarter notes followed by one measure of the pattern. Note how an increase in activity enlivens the anacrusis and strengthens the opening crusis (the goal!). Initiate eighth notes with a lift in weight, tilt slightly forward, and take smaller steps on the balls of your feet; absorb additional weight on the following crusis with bended knee.

Rhythm B: Tis rhythm transforms beat three into a lifted metacrusis, creating an extended anacrusis that produces more momentum and subsequent weight on the opening crusis than Rhythm A. Practice stepping one measure of Rhythm A and Rhythm B back to back to compare their gestural diferences.

Rhythm C: An extended anacrusis on beat two further enhances momentum to the opening crusis. Tis rhythm is often accompanied with a crescendo. If not, the performer understands to do so unless directed otherwise, given the natural correlation that exists between an increase in activity and dynamics. A crescendo intensifes rhythmic momentum; however, if a composer does not want this efect, he or she will write a *decrescendo* to elicit a unique motion against the normal rhythmic fow.[40] Perform this rhythm with both a crescendo and a decrescendo to experience their gestural diferences. Notice how natural it feels to push this rhythm forward with a crescendo (increased energy) compared to holding it back with a decrescendo (decreased energy). Withholding dynamic energy against an increase in rhythmic activity is a hallmark stylistic feature of the late romantic era.

Rhythm D: Tis rhythm transforms the opening crusis into what Abramson calls a "lifted crusis." As he explains, "Tere is still a crusic accent on the downbeat, but there is quite a lift into the second eighth. Te

lifted crusis is often mistaken for an anacrusis."[41] If the rhythm were to persist, it would shift the metrical framework by one beat, creating what Samarotto calls a "shadow meter." As he explains, "Te main meter, the meter as written, casts a shadow, as it were, on a subsidiary, displaced meter, which we are drawn to hear as real until it dissolves."[42]

Stepping and conducting this rhythm is challenging but efective for dramatizing its confictual efects: the lifted crusis in the feet moves in opposition to the downward beat of the arms, and the following agogic falls on the metacrusic carryover on beat two. We recommend stepping this rhythm alone, before adding your arms.[43]

Rhythm E: Tis rhythm creates a lifted metacrusis on beat two, giving added weight to the following metacrusis, creating a midbar crusis that challenges the opening crusis. Eighth notes on beat two feel strange for two reasons: they fall on the relaxed metacrusis, and they lack any preparatory lift being preceded by the crusis.

Rhythm F: Tis rhythm presents an even greater challenge to the normative measure. An extended anacrusis softens the opening crusis, which further strengthens the midbar crusis. Te meter usually has time to straighten out; however, if it were to persist, a metrical ambiguity could result. Te performer can either highlight or downplay this ambiguity by the amount of comparable emphasis placed on beat one or three.

Rhythm G: Tis rhythm presents a subtle confict with the meter. Te agogic weight arrests the lift of the fnal anacrusis, producing a closing rather than continuing efect.

Rhythm H: Eighth notes on beat three cause the fnal anacrusis to group with the following crusis, creating a three-beat cycle that spans across the bar line.

Rhythm I: Tis rhythm produces a front-end focal point aligning with the measure; however, the agogic on beat three makes the fnal anacrusis feel more metacrusic. Perform this rhythm with a subtle decrescendo and slight break at the end of each measure.

Rhythm J: Eighth notes transform beat one into a lifted crusis, creating a shadow meter that displaces the metrical framework by one beat (as in Rhythm D). Highlight or downplay this efect in your movements.

Guided Analysis for Example 3.4.1—Eighth-note rhythms: Compare and discuss the dynamic interaction between surface eighth-note patterns in common meter. Write the rhythms on the board and diagram their interaction with meter using two strands of crusis, metacrusis, and anacrusis labels beneath the rhythm: one strand denotes the normative crusis, metacrusis, and anacrusis measure; the other strand uses crusis,

metacrusis, and anacrusis labels to denote modifcations afected by surface subdivision rhythms, as illustrated in Example 3.4.1.[44]

Instructor's Note

Canons are excellent for teaching subdivision; see Chapter 1: Exercises 1.6a and 1.6b. Create canons that pit subdivisions against longer durations in diferent patterns.

Refer to Section 8: Exercise for Learning Rhythmic Patterns for other efective exercises to instill, read, and dictate subdivided rhythms in an ensemble setting. In particular, see Exercise 3.8.1: Ensemble Rhythm Reading, Exercise 3.8.2: Growing Measures, Exercise 3.8.5: Augmentation and Diminution, and Exercise 3.8.7: Setting a Text and/or Melody to Rhythms.

Subdivision by a Factor of Three: Triplets—Three in One

Subdividing three into one not only produces a faster rhythm but also transforms the normally binary-divided straight-lined path into a thrice-divided curve- shaped path.

Techniques for Clapping Triplets with Musicality

Clap triplets in small circular motions, letting the fnal subdivision fall to the bottom of each circle, that is, one cycle per triplet. Count out loud or silently, or vocalize using any standardized syllables, such as "one-and-a" or "trip-l-et," or create your own.

Comparing Triplets to Eighth Notes: To compare the qualitative difference between a circular triplet versus straight-lined eighths, practice them back to back. Clap a cycle of triplets followed by a pair of eighths.

Subdivision by a Factor of Four: Sixteenths—Four in One

Techniques for Clapping Sixteenth Notes with Musicality

Clap sixteenth notes with small, light movements; the faster the tempo, the smaller and lighter the movement is. Experiment with the following techniques: (1) move your forearms down for the frst sixteenth clap and

upward for the remaining three; (2) for faster tempos, tap sixteenths with just your fngertips into the palm of your hand, placing more emphasis on the frst of four taps; and (3) use the modifed “touch-brush” technique introduced earlier for eighths. In the palm of your hand, touch downward with your fngertips, followed by three upward brushes with the back of your fngertips. Count out loud or silently as you clap, or vocalize using standardized syllables, or create your own.

Once adept at clapping sixteenths outside a metrical context, cast them in the context of simple meters. Te challenge is to express a quadruple subdivision within the normative metrical fow. In other words, each set of sixteenths is nuanced diferently based on its metrical location.

Techniques for Clapping Sixteenth-Note Rhythms with Musicality

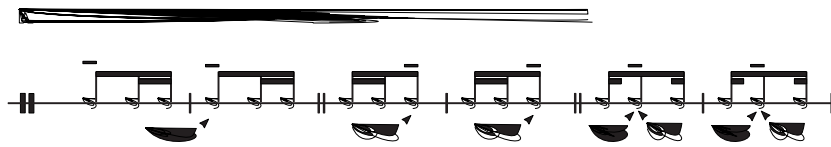
Clap and/or intone several iterations of each sixteenth motif shown in Example 3.4.2 before combining them into longer rhythmic patterns. Cast them in two-, three-, and four-beat simple meters.

Rhythm A (dactyl): Clap the rhythm, giving more emphasis and twice the space to the opening crusis with a downward slide, followed by two upper brushes. When this rhythm appears in a series, a natural agogic emerges of the lift of the double anacrusis.

Rhythm B (anapest): Clap this rhythm with two upper brushes followed by a downward strike, giving more emphasis and twice the space to the fnal crusis. It is natural for this anacrusic opening rhythm to start on an upbeat, as it usually does. Note the metrical opposition that ensues when it starts on the opening crusis.

Rhythm C (amphibrach): Tis syncopated rhythm contains a built-in agogic; give more emphasis and twice the space to the inner agogic. Experiment with diferent touches that emphasize either the agogic’s opening strike or held sixteenth.

Example 3.4.2. Subdivided rhythms.



Exercise 3.4.4: Ensemble Counterpoints for Subdivisions

Te following counterpoint exercises can be performed between the instructor and students, partners, or two groups.

Purpose: Anchoring a 1:2, 1:3, or 1:4 ratio between two parts; performing your part while listening to another, an essential ensemble skill.

Directions: First establish the tempo. Te instructor claps quarter notes while students clap eighth notes. When the instructor says “change,” the instructor claps eighths and the students clap quarters. Perform at diferent tempos, dynamic levels, and articulations.

VARIATION A: Quick reaction—Divide the class into two groups. One group claps eighths and the other claps quarters. On the instructor’s cue “change,” groups swap note values. Once students are adept at swapping rhythms with ease, ask them to incorporate expressive changes. For instance, the instructor could say, “quarter notes, forte—eighth notes, piano” or “everyone ritard,” and so on. Or the instructor could conduct the expressive changes to be made with clear gestures.

Exercise 3.4.5: Body Counterpoints for Subdivisions

Purpose: Coordinating rhythms in ratios of 1:2, 1:3, and 1:4 with ease and expressive nuance between hands and feet.

Directions: Body-counterpoint exercises can be performed in a variety of ways. We recommend any of the following techniques: (1) clapping subdivisions and stepping the meter, and (2) stepping subdivisions and

conducting, which is more challenging. If space is limited, we recommend (3) vocalizing subdivisions and tapping the meter across your chest.

1. Stepping Meter and Clapping Subdivisions

Directions: Quick reaction—Students begin by clapping eighth notes and stepping quarter notes in common time. On the instructor's cue "switch," they change parts. In other words, students begin clapping quarters and stepping eighths. Perform in silence or to improvised or composed music, or to a recording.

VARIATION A: Te instructor plays a two-part counterpoint at the keyboard consisting of quarter notes in one register and eighth notes in another register. Students are to clap the rhythm of the upper register and step the rhythm of the lower register. For instance, if the instructor plays eighth notes in the upper register and quarters in the lower, students clap eighths and step quarters. When the instructor swaps rhythms and plays eighths in the lower register and quarters in the upper, students switch accordingly by stepping eighths and clapping quarters.

VARIATION B: Students clap and step quarters together in common time. As students are stepping beat four, the instructor calls out "one," "two," "three," or "four." Students are to clap eighths on that beat in the following measure and then resume quarter notes. For a greater challenge, the instructor calls out two or more beats, such as "two and four." Students clap eighth notes on beats two and four in the following measure. Tis exercise trains students to subdivide instantly on any metrical beat and to compare gestural diferences.

VARIATION C: Quick reaction—Combined eighth, triplets, and sixteenths—Students clap and step quarters in common time. Te instructor calls out "two," "three," or "four." Each number represents a subdivision: two = eighths; three = triplets; four = sixteenths. Students clap the requested subdivision on the next beat and then resume quarter notes.

2. Stepping Subdivisions and Conducting

Formation: Place yourselves randomly about the room or in a large circle moving clockwise.

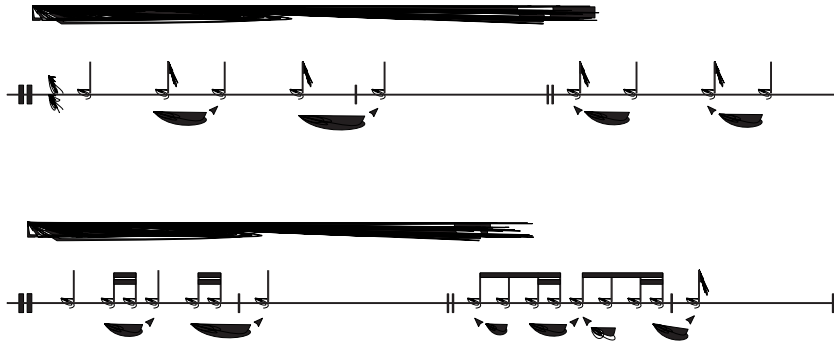
Directions: Students begin by stepping eighth notes as they conduct in common time to coordinate a 2:1 ratio between feet and arms. Refer back to the analyzed rhythms and suggestions outlined in Example 3.4.1. Stepping subdivisions while conducting dramatizes the dynamic

interaction of subdivided surface rhythms against established meter between arms and feet.

Analysis of Compound Meter Subdivisions

Example 3.4.3 presents four typical subdivided rhythms in compound meter.[45] The dotted quarter is assumed as the beat. Consider these rhythms as models for illuminating the gestural qualities inherent in other compound rhythms. Techniques for stepping and for stepping and conducting compound rhythms are outlined next. Count out loud or silently as you perform each rhythm.

Example 3.4.3. Compound rhythms.



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Guided Movement/ Analysis of Rhythms A– D

Rhythm A: This typical quarter-eighth pattern produces a front-weighted rhythm that moves across the bar. The long-short rhythm is best captured in the uneven stride of a "gallop." Gallop the rhythm forward, leading with your right or left foot. Or gallop in place facing forward; show each unit by stepping the quarter forward with your right foot and the eighth back with your left, in a right-left/right-left rocking pattern. Let the lift of the anacrusic eighth release into the following crusis as indicated by the arrow.

Rhythm B: This rhythm (the inverse of Rhythm A) exhibits a recessive motion that falls back onto itself as shown with the arrow. Try stepping the eighth note back with one foot and the quarter forward with the

other to show the longer-weighted quarter falling back into the previous eighth.

Rhythm C: Step forward on the quarter, drag your left toe forward, and lift and advance the anacrusic sixteenths into the next quarter, absorbing additional weight with bended knee.

Rhythm D: Tis rhythm exhibits combined recessive and progressive motions to and from the main beats. Step the frst eighth forward and the second eighth back, followed by three steps forward. Feel the motion leading to and from beats one and two.

Practice several iterations of each rhythm pattern before combining them into longer rhythmic patterns. Perform in diferent tempos and dynamics. Once adept at stepping single-line compound rhythms, step and conduct rhythm patterns.

Instructor's Note

Refer to Section 8: Gestural Rhythmic Patterns for other useful exercises for instilling, reading, and dictating compound rhythm patterns. Also see directions for canons in Chapter 1: Exercises 1.6a and 1.6b.

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5. Rests and Pauses—The Expression of Silence

> A silence can say more than a discourse.
> — Jaques- Dalcroze

Introduction (to the Instructor and Students)

How does a performer express silence? First, you must remain mentally present throughout the rest. Te inactivity of rests can cause one to lose attention and fow. As Abramson points out, "Rests create problems for students who do not recognize them as measured activity. Te French word arreter, which means 'to wait,' actually provides a more practical defnition for the performer, who, while waiting during a rest, must remain alive, aware, and responsive."[46] Although sonically inactive, silence is musically active and open to interpretation. Physically representing rests trains us to realize that although not sounding, silent beats are to be felt and fully present.

Point to Remember: A mechanical performance measures silence; a musical performance expresses silence.

Techniques for Silent Clapping Quarter Rests with Musicality

Purpose: Measuring and musically interpreting the hidden activity of silence.

As Abramson explains:

> Tere is a tendency to stop feeling the beat, stop feeling the meter, stop hearing the sounds you have just sung, and stop making connections to the sounds you're going to sing after the rest. Tis "silent disruption" requires a very strong sense of inner hearing, inner beat, measure and rhythm…. Silent clapping is particularly useful because it forces the feeling of rhythm and meter into the joints and muscles called proprioception.[47]

Directions: Cycle clap one measure of quarters and then silent cycle clap one measure of quarter rests in common time. For rests, mimic the motion of clapping quarter notes without touching your hands. As you silently clap, pay attention to the sensation of motion felt in your hands, wrists, forearms, elbows, upper arms, and shoulders. Experiment with diferent clapping techniques for each cycle of quarter notes and rests, such as a light tap or bold strike at diferent dynamic levels. Note, in particular, how the entry into silence is infuenced by the quality of preceding sounds; for instance, silence absorbs the aftermath of a vigorous *fortissimo* much diferently from that of a tapering diminuendo. Likewise, the quality of silence leading into the re-entry of sound is infuenced by the anacrusic preparation needed for, say, the entrance of a bold forzando versus that of a hushed *pianissimo*. Both preceding sounds and the anticipatory preparation for subsequent sounds have tremendous bearing on the hidden activity of rests.

Instructor's Note

A common problem for students is to come in too soon, rather than too late, after a rest. Filling in silence with movement helps students remain physically and mentally present throughout its length.

Exercise 3.5.1: Stop and Go

Purpose: Controlling sudden shifts in weight and balance resulting from starting and stopping; transitioning efortlessly from states of activity (excitation) and inactivity (inhibition); remaining alert throughout a rest's duration; discerning the exact measurement and quality of silence.

Directions: For directions, refer to Chapter 1: Exercise 1.5. Consider the following variations.

VARIATION A: When movers stop walking, ask them to show the silent beat somewhere else in their body.

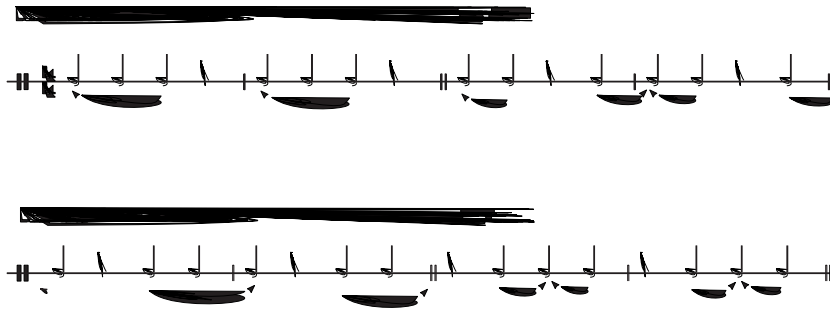
VARIATION B: Te instructor sets and maintains a good walking tempo by performing music—improvised or composed—in the middle register of the keyboard. Students step to the music. When they hear an isolated high note played, they stop walking. When they hear an isolated low note played, they resume walking. (A variety of verbal and/or musical commands can be used for this exercise.)

VARIATION C: Students walk a steady beat side by side with a partner to music being played by the instructor, composed or improvised. Te instructor calls out a number indicating the length of the rest that begins on the next beat. For example, if the instructor calls out "four," students turn to their partner and gesture four beats of silence to one another. Experiment with diferent postures and movements that refect the quality of silence based on the music just heard. On the fnal beat of silence, students prepare for re-entry with a convincing anacrusis and begin stepping with the resumed music until the instructor calls out another number.

Analysis of Quarter Rests in Common Time

We present quarter rests in common time to illustrate how metrical location afects the gestural quality of rests. See Example 3.5.1. Rhythms are

Example 3.5.1. Analysis of quarter rests in common time.



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presented in two-measure units to illustrate gestural motion across the bar (as in Rhythms B and C).

Guided Movement/ Analysis of Rhythms A– D

Rhythm A: A rest on beat four creates a three-note gesture with a front-end focal point as shown by the backward-pointing arrow.

Rhythm B: A rest on beat three creates a gestural motion leading both to and away from the opening crusis.

Rhythm C: A rest on beat two creates a momentary loss of momentum that is regained by the double anacrusis leading into the following crusis.

Rhythm D: A rest on the opening crusis enlivens the following metacrusis, giving this typically relaxed beat more "get up and go." Beat two should be slightly accented as it initiates a three-note gesture leading to and away from beat three.[48]

- Accentuation Rule #3: Accent a note preceded and followed by a rest, even if it falls on a weak beat.

Exercise 3.5.2: Stepping Quarters and Snapping Rests

Purpose: Developing sensitivity to the metrical location and gestural quality of rests.

Directions: Perform several repetitions of each rhythm featured in Example 3.5.1 by stepping quarter notes and snapping quarter rests, to embody the gestural characteristics featured in each pattern. For instance, a rest placed on the fnal anacrusis (Rhythm A) feels very diferent from a rest placed on the opening crusis (Rhythm D). Note: Make sure the foot about to step after a rest moves through the rest, which is in keeping with the adage that all beats require an efective anacrusis. Perform rhythms with diferent tempos, dynamics, and articulations.[49]

Exercise 3.5.3: Continuous Rhythmic Dictation—Sound and Silence to Symbol

Purpose: Tis approach for giving dictation is especially efective for dictating rests, that is, translating silence to symbol. We demonstrate using the quarter-rest patterns featured in Example 3.5.1; however, this procedure can be used for dictating any rhythmic patterns you have studied.

Directions: First the instructor announces the subject, for example, in this case, “quarter notes and rests in common time.” (1) Te instructor claps a two-measure pattern two or more times (for instance, Rhythms A and D from Example 3.5.1) in front of the class. On the fnal beat of the second measure, the instructor says “mark.” Students mark the rhythm across their chest while the instructor continues to clap underneath. For rests, students pull their hand away from rather than tap on the chest. (2) As students mark the fnal beat of the fourth measure, the instructor says “clap.” Students clap the rhythm pattern. (3) On the fnal beat, the instructor says “clap and speak.” Students clap and intone the rhythm. (4) When fnished, the instructor says “write.” Everyone continues to feel an internalized beat and notates the rhythm. Te class reads and performs their notated rhythm.[50]

Instructor’s Note

Clapping a rhythmic dictation in front of the class presents both a visual and an aural cue for students, which is especially useful when frst learning to mark the location and measurement of rests. For a more advanced version, dictate rhythms on the keyboard, which requires students to rely solely on their ears, fostering aural independence.

Techniques for Silent Clapping Eighth Rests with Musicality

We recommend using a modifed version of the “touch-brush” technique for showing eighth rests (see Section 4: Techniques for Clapping Eighth Notes with Musicality.) Rather than touching and brushing the palm of

your hand as is done for eighth notes, you will pull your hand away to denote an eighth rest. For instance, practice a series of eighth-note/eighth-rest rhythms (a sound-silent subdivision) using the modifed touch-brush technique. Strike the palm with your fngertips to sound the eighth note; brush up and away without touching hands to mark the eighth rest. Tis modifed touch-brush technique is useful for articulating the qualitative diference in silence between eighth rests that fall on versus of the beat.

Techniques for Silent Clapping Sixteenth Rests with Musicality

As with eighth-note rests, we recommend a modifed touch-brush technique to articulate sixteenth-rest subdivision patterns (see Section 4: Techniques for Clapping Sixteenth Notes with Musicality). As with eighth rests, lift the touch or brush away from the palm to represent the sixteenth rest's subdivision within the beat.

For other efective exercises for learning rests, refer to Section 8: Gestural Rhythmic Patterns.[51]

6. Dotted Rhythms

Introduction (to the Instructor and Students)

Te following movement exercises are for learning typical dotted rhythmic patterns in simple and compound meters. We present (1) single-line exercises—clapping, stepping and vocalizing; (2) ensemble-counterpoint exercises performed between the instructor and class, with a partner, or with two groups; and (3) body-counterpoint exercises, to internalize the dynamic interaction between dotted and straight rhythms between two limbs.

Preparatory Exercise 3.6.1: Dotted Quarters in Simple Meters

To compare the diference in feel between an even and an uneven dotted rhythm, begin by clapping, stepping, or tossing a ball between the hands single-line rhythms: one measure of quarters followed by one measure of a dotted quarter-eighth in common time. Count eighth-note subdivisions as you perform the rhythms.

Instructor's Note

Canons are excellent for learning the interplay between dotted and straight rhythms. See Chapter 1: Exercises 1.6a and 1.6b. For other effective exercises to instill, read, and dictate dotted rhythms in an ensemble setting, refer to Section 8: Gestural Rhythmic Patters. In particular, see Exercise 3.8.1: Ensemble Rhythm Reading, and Exercise 3.8.2: Complementary Rhythm—an excellent method for feeling and analyzing the underlying pulse of dotted rhythms.

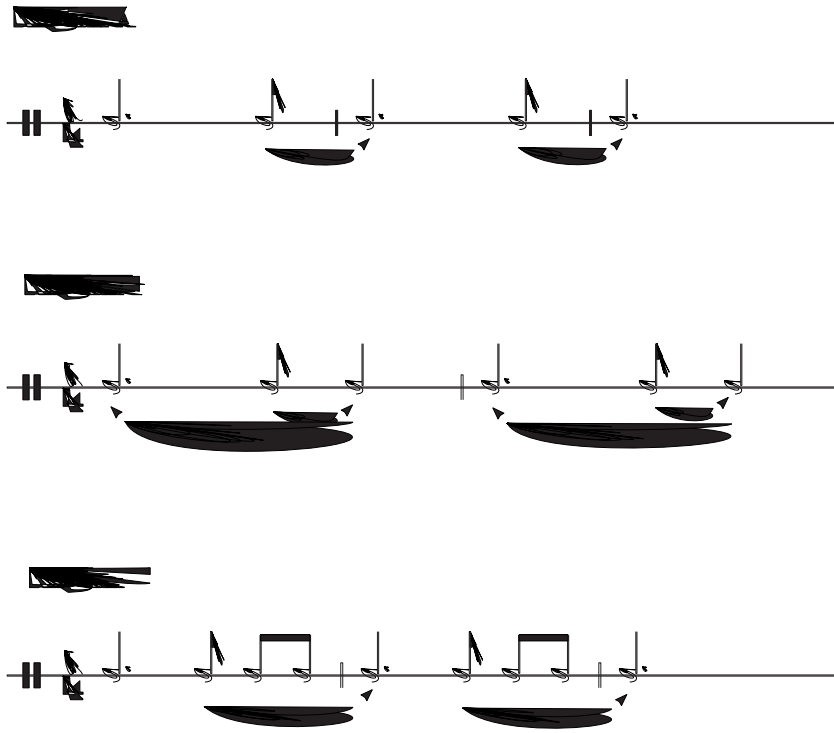
Techniques for Clapping Dotted Quarters with Musicality

To show a dotted duration, (1) clap and pull one or both hands apart through the dot, or (2) clap and pull both hands together through space and give a slight press on the dot to emphasize the underlying pulse. Lightly brush the following eighth; feel its anacrusic lift move into the next dotted quarter, or (3) clap-slide down the dotted quarter and brush up the following eighth in the palm of your hand, giving more weight to the dotted duration. Te main point is to retain a sense of involvement through the dot!

Suggestions for Stepping Dotted Quarters

To efectively show the long-short feel of a dotted quarter-eighth rhythm, step the dotted quarter with a longer stride and press into the dot with bended knee while dragging the toe of the moving foot forward; tap the following eighth with the ball of your moving foot as you lift of your bended knee. Tis front-weighted right-left (or left-right) pattern dramatizes this dotted rhythm's lopsided long-short feel. See Example 3.6.1.

Example 3.6.1. Dotted quarter rhythms.



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Analysis of Dotted Quarter Rhythms in Simple Meter

Guided Movement/ Analysis of Rhythms A– C

Rhythm A: Tis rhythm points across the bar line into the following dotted quarter, producing what Graybill calls “a circular across-the-beat grouping.”

Stepping Rhythm A: Represent the across-the-bar interpretation by gesturally moving the anacrusic lift through the bar line into the following dotted quarter.

Rhythm B: Tis rhythm exhibits a two-level hierarchy; the smaller gesture ending on the quarter ultimately points back to the opening dotted quarter in a recessive manner, creating a stationary front-weighted afect. As Graybill explains:

> A forward-pointing arrow at a lower level contradicts a backward-pointing arrow at a higher level. Te contradiction, however, is only apparent; the

> backward-pointing arrow does not signify that every succeeding pitch in the measure is increasingly recessive … but rather that the smaller gesture as a unit is recessive.[52]

Stepping Rhythm B: This rhythm produces an alternating right-left-right/left-right-left stepping pattern. Represent the recessive sweep of each metrical unit by stepping the subsequent dotted quarters backward to dramatize the front-ended weight of this rhythm. In contrast, stepping all beats forward represents a forward sweep across measures.

Rhythm C: Tis rhythm features an extended anacrusis that passes through into the downbeat of the next measure. As Graybill points out, this gesture "could be performed with a slight stress on the eighth note on the third beat; I believe, however, that this is a less natural option since it interrupts the smooth fow implied in the succession of eighth notes."[53] Rhythms C and A demonstrate a gesture's ability to defy metrical constraints.

Stepping Rhythm C: Step this rhythm forward, expelling the anacrusic momentum of three eighths over the bar line into the dotted quarter; absorb additional agogic weight with bended knee.

Exercise 3.6.2: The Dotted Eighth- Sixteenth— The "Skip"

Purpose: Te uneven gait of a skip vivifes the characteristic long-short subdivision of the dotted eighth–sixteenth rhythm.

Formation: Scatter about the room in the ready position.

Directions: Skipping is a classic eurhythmics technique for realizing dotted eighth-sixteenth rhythms. See Example 3.6.2. The

Example 3.6.2. Te dotted eighth–sixteenth rhythm.

instructor starts to perform music featuring the dotted eighth-sixteenth rhythm—improvised or composed (for instance, Dvorak's Humoresque is an effective example)—and asks students to skip to the music. If performing music at the keyboard, change the tempo, reminding students to make the necessary adjustments in space, energy, weight, and balance. For instance, slower tempos allow more time to lift the knee of your free leg higher in the air—feel the expansion of the dot in your lifted knee; for faster tempos, keep your legs lower to the ground.[54]

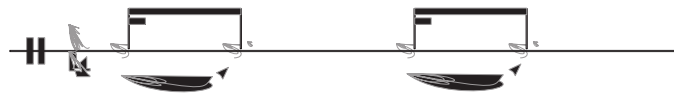
VARIATION A: Conducting and skipping dotted rhythms presents an odd countersensation in the body that requires practice. As the body goes up to make the skip, the arms come down to beat the crusis, which takes time to coordinate.[55]

Exercise 3.6.3: The Sixteenth–Dotted Eighth—The Assemblè

Purpose: Capturing the uneven short-long rhythm of the sixteenth–dotted eighth rhythm.

Directions: See Example 3.6.3. To experience the end-weighted punctuation of the sixteenth–dotted eighth rhythm, we recommend a pattern loosely adapted from ballet called the Assemblè. Stand with your feet together. Represent the sixteenth by quickly brushing one leg out as you push off with the supporting leg. Bring your feet back together with a gentle hop and land with knees bending into the dotted eighth.[56]

Example 3.6.3. Te sixteenth–dotted eighth rhythm.



Analysis of the Dotted Eighth Rhythm in Compound Meter

Example 3.6.4. Dotted rhythm in compound meter.

Guided Movement/Analysis of Dotted Eighth Rhythm

Tis typical compound dotted rhythm pattern (see Example 3.6.4) produces an alternating right-left-right/left-right-left stepping pattern. It also features a two-level hierarchy as shown by the arrows. To dramatize the larger recessive motion, step the dotted eighth back and the following sixteenth and eighth forward. Or step the entire rhythm forward, placing more weight on the dotted eighth. Or invent your own patterns.

Exercise 3.6.4: Body Counterpoints for Dotted Rhythms

Purpose: Experiencing the interaction of dotted rhythms and established meter within the space of your body.

Directions: We recommend the following body- counterpoint techniques for learning dotted rhythms in compound meter: (1) intone the rhythm and tap the meter on your chest; (2) clap the rhythm and step the meter; and (3) step the rhythm and clap or conduct the meter, which is much more challenging than the frst two techniques. Refer to Example 3.6.4. To follow are directions for clapping dotted rhythms and stepping the meter.

Preparatory Exercise: Step the beat in common time and alternate clapping one measure of quarters with one measure of the dotted quarter–eighth rhythm. Or toss the rhythm with a ball from your right to left hand as you step. Note the dynamic diference between aligned quarters versus unaligned dotted quarters between hands and feet. Feel the expansion of the dot in your hands.

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7. Syncopation

Syncopation Defned (to the Instructor and Students)

Syncopation can be viewed as an argument between the established meter and a contradictory surface rhythm. To perform syncopation efectively, the opposing forces of the argument must be realized and felt.[57] We distinguish between three types of syncopation: (1) by accented weak beats or weak divisions of a beat, (2) by delay (retardation), and (3) by advance (anticipation).

Te following preparatory exercises introduce the three types of syncopation performed in a single line. We also present ensemble counterpoint exercises that include performing syncopations between the instructor and class, with a partner, and with two groups. We conclude with body-counterpoint exercises that allow you to feel the oppositional interaction of syncopated rhythms against the established meter in your body. As Dalcroze reminds us, syncopation is one of the most challenging rhythms to master and may take months to execute with accuracy and expressive artistry.[58]

Preparatory Exercise 3.7a: Accented Weak Beats and Subdivisions

Directions: Quick reaction—Accenting weak beats—Students clap, drum, or step quarter notes in common time. As they perform the last beat of the measure, the instructor calls out a weak beat, “two” and/or “four.” Students accent that beat in the following measure (this is an efective method for learning to negotiate the competing demands between maintaining the established meter against surface accents). Allow students to experience several measures of a requested weak beat before calling out a diferent weak beat for them to accent. On the instructor’s cue “back,” students return to stepping the meter without accented weak beats. Perform in diferent meters, tempos, dynamics, and articulations.

VARIATION A: Quick reaction—Accenting weak subdivisions—Students clap or drum eighth notes in common time. Upon the instructor’s cue “one,” “two,” “three,” or “four,” students place a phenomenal accent

on the weak subdivision of that beat in the following measure. Increase the challenge by calling out combinations of weak beats to accent, such as “one and four,” and so on.

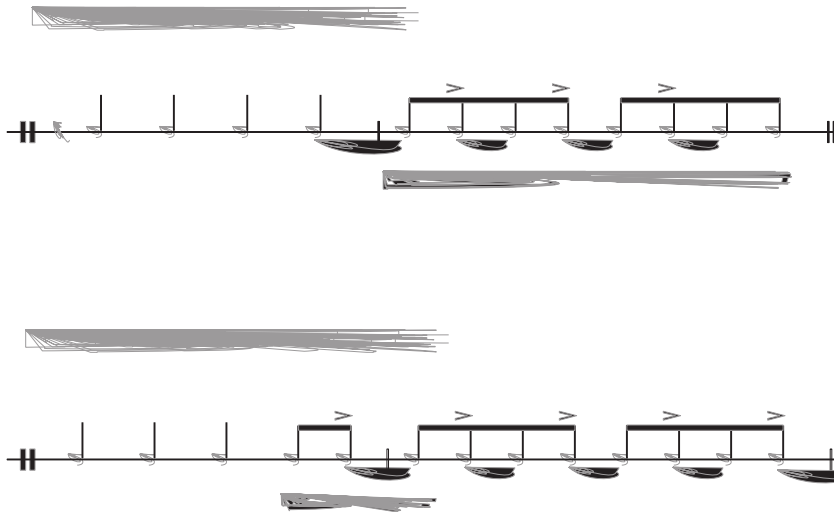
Preparatory Exercise 3.7b: Syncopation by Delay and Advance

Syncopation by delay or advance elicits either a state of inhibition (holding back) or excitation (starting too early). See Example 3.7.1.

Guided Movement/Analysis of Syncopated Rhythms A and B

Rhythm A: Syncopation by delay results from tying a beat into the following downbeat, creating an agogic that presses into the following crusis. Feel the opposition between tie and suppressed crusis with bended knee

Example 3.7.1. Syncopation by delay and advance.



or lift up on it; experiment with derivations in timing, dynamics, and articulation to either enliven or downplay the syncopation.

- Accentuation Rule #1: Accent strongly the last note of a measure if it is tied over to the frst beat of the following measure.

Rhythm B: Syncopation by advance results when a surface rhythm enters too soon, creating a quickened beat followed by a tie. Show the opposition of the syncopated tie with an accented lift and press to highlight the opposition between the tied rhythm and established meter. Again, experiment with derivations in timing, dynamics, and articulation to either highlight or downplay the syncopation. Tese expressive nuances make a world of diference between a subtle versus musically animated syncopation!

For both delayed and advanced syncopations, count (out loud or silently) at the level of the syncope (in this case, the eighth note) to experience the opposition between meter and surface rhythm. In other words, underlying beats need to be fully present and felt for the argument to ensue.

- Accentuation Rule #2: Accent the frst note of a group that falls on a weak beat when the preceding notes each take up a beat throughout the measure.

Point to Remember: Show the opposition between established meter and syncopated beats with expressive nuance.

Exercise 3.7.1: Single- Line Syncopations

Purpose: Moving in and out of a syncopation with accuracy and ease; feeling the opposition of delayed and advanced syncopations against the established meter.

Directions: Tere are several ways to perform delayed and advanced single-line syncopations—clapping, tossing a ball, drumming, and stepping. Stepping syncopated rhythm patterns is challenging because of the unexpected shifts in balance required to control ofbeats. To learn to move in and out of syncopated patterns by delay and to advance with ease, practice performing several measures of Rhythm A and several measures of Rhythm B until fuent. In a delayed syncopation, replace the crusic step with bended knee; feel the resistance between the underlying pulse and tie. Prepare an anticipated syncopation with an anacrusic lift.

Instructor's Note

Canons are excellent for pitting syncopated against straight rhythms (see Chapter 1: Exercises 1.6a and 1.6b). Perform music at the keyboard (either improvised or composed) with sustained tones to help clarify the syncope. For other single-line exercises, see Exercise 3.1.4: Te Traveling Beat: Circle Passing, Clapping, and Drumming. Also see Section 8: Gestural Rhythmic Patterns. In particular, see Example 3.8.2: Complementary Rhythm for feeling and analyzing the underlying beat of a syncopated rhythm.

Exercise 3.7.2: Ensemble Counterpoints for Syncopated Rhythms

Purpose: Experiencing the oppositional interplay between straight and syncopated rhythms in an ensemble setting, a vital skill for ensemble playing.

Once single-line syncopations have been mastered with ease and expressivity, introduce ensemble exercises to experience the interaction between established meters and syncopated rhythms. Tese exercises can be performed with the instructor, between partners, or between two groups.

1. Syncopated Counterpoint with the Instructor

Directions: In this exercise, students create delayed or advanced syncopations against the instructor's constant beat, as shown in Example 3.7.1.

Repeat several iterations of each example until fuent. Te instructor begins by performing a constant beat of quarter notes in common time (clap, drum, or play a composed or improvised melody or progression at the keyboard). Students clap or drum several iterations of a syncopated rhythm against the instructor's constant beat.

VARIATION A: Try the reverse. Students perform the constant beat against the instructor's syncopated rhythms.

VARIATION B: For a greater challenge, the person giving the syncopation increases the level of complexity. Tose performing the meter need to maintain the beat no matter how complex the syncopation gets!

2. Syncopation with a Partner or Two Groups

Formation: Partners or two groups stand facing one another.

Directions: Rhythms can be intoned, clapped, or drummed. One person (or group) performs the straight rhythm against the other's syncopated rhythm by delay or advance.

VARIATION A: Syncopated rounds with a partner—Stand face to face with a partner. Clap or drum syncopated rhythms by delay or advance (Example 3.7.1) in a round. One person begins the rhythm; the second joins in a measure later. Practice many cycles of each rhythm to engrain the interaction between straight and syncopated rhythms. Play of of each other's rhythms. After mastering the round face to face, turn your backs to one another and perform the round relying solely on your ears.

Exercise 3.7.3: Circle- Tapping Syncopations

Purpose: Experiencing a kinesthetic/tactile representation of combined syncopated and straight rhythms; performing opposing rhythms with precision and accuracy in an ensemble setting.

Formation: Stand in a circle facing clockwise close enough to place one hand on the shoulder of the person in front of you.

Directions: Designate students as either A or B. One group is assigned the straight rhythm, and the other group is assigned the syncopation by delay or advance. Each group member taps the assigned rhythm across the back shoulders of the person in front of him or her. In this exercise, participants are doing and feeling straight and syncopated rhythms simultaneously. Tat is, the participants tapping syncopated rhythms are feeling straight rhythms played on their backs, and vice versa. Experiment with diferent tempos and dynamic levels.

Exercise 3.7.3: Body Counterpoint Syncopated Rhythms

Purpose: Feeling the oppositional interplay of straight and syncopated rhythms (disassociation) within the personal space of our bodies.

Directions: Body counterpoint exercises can be performed several ways. We recommend the following order:

1. Intone the syncopation and conduct or tap the meter across your chest.
2. Clap, drum, or toss the syncopation and step the meter.
3. Step the syncopation and clap or drum the meter—this is more challenging.
4. Step the syncopation and conduct the meter—this is very challenging!

Instructor's Note

Coordinating syncopated and straight rhythms between two diferent limbs is one of the most efective means for internalizing their oppositional interaction; however, it is also one of the most difcult counterpoints to execute with ease and expressive nuance. Remind students that syncopated rhythms require much practice and time to master and to gradually increase tempos.

Considerations for Stepping Syncopation and Conducting Meter

Once adept at stepping the meter and clapping syncopations, conduct the meter and step syncopated patterns, which dramatizes their oppositional afect. As your foot steps of the beat, your arms must continue to move down on the beat to keep time. Start at a slow tempo and gradually work up speed. Practice several repetitions of one- to two-measure syncopated patterns until mastered.

8. Gestural Rhythmic Patterns

Introduction (to the Instructor and Students)

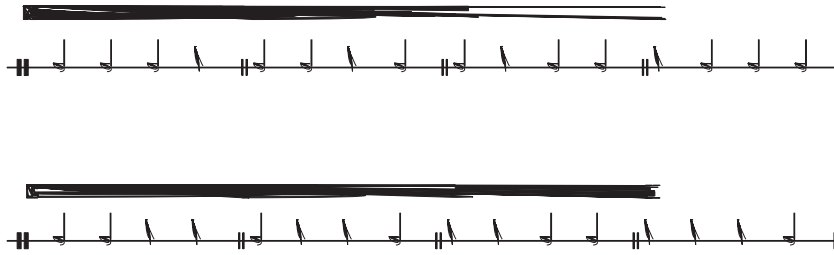
We begin this section by presenting seven exercises useful for learning longer rhythmic patterns. Use these exercises for learning any note values and rests you are studying. We also analyze two longer rhythms, one in simple and one in compound meter, featuring many of the rhythmic cells introduced in previous sections to demonstrate the gestural nuance and hierarchy that results from longer rhythms. Tis section ends with improvisatory rhythmic activities for promoting musical spontaneity and expressive artistry.

Exercise 3.8.1: Ensemble Rhythm Reading

Purpose: Infusing sound with symbol; solidifying a rhythmic counterpoint between your part and another; reading and aurally recognizing rhythms.

Directions: Students perform the following rhythmic cells shown in Example 3.8.1 (for purposes of demonstration, we use quarter rest patterns, which are simple, but any rhythms of greater difculty can be used). Practice reading through the patterns in diferent directions: forward and backward. Skip over patterns both forward and backward, such as A, C, E, G and H, F, D, B. String together diferent combinations of rhythms.

Example 3.8.1. One-measure quarter rest patterns.



VARIATION A: Divide the class into two groups: A and B. Group A performs the frst pattern and Group B performs the second pattern, until all parts are read. In this exercise, students read (excitation) and wait (inhibition) for their entrance.

VARIATION B: Swapping rhythmic patterns— Divide the class in half. Te instructor points to two diferent rhythms, one for each group to perform in counterpoint. On the instructor's cue "change," groups switch rhythms. Perform rhythms in diferent tempos, dynamics, and articulations.

VARIATION C: Te instructor or a student performs two or more of the rhythms in a row, such as D, A, C. Students determine the order of the rhythms performed.

VARIATION D: Te instructor or a student performs one or more of the rhythms. Students respond by performing the rhythm in augmentation (twice as slow) or diminution (twice as fast).

Exercise 3.8.2: Complementary Rhythm

Purpose: Developing an acute awareness of rhythmic duration, analysis of note values and underlying subdivisions, and an appreciation for the hidden vitality of unplayed beats.

Complementary rhythm is a classic eurhythmics exercise that trains you to acknowledge a rhythmic duration's length and underlying

subdivisions; it is particularly useful for learning dotted rhythms, syncopations, and uneven meters. In a complementary rhythm exercise, played beats are viewed as the “positive rhythm” and unplayed beats are viewed as the “negative rhythm,” that is, the complement.

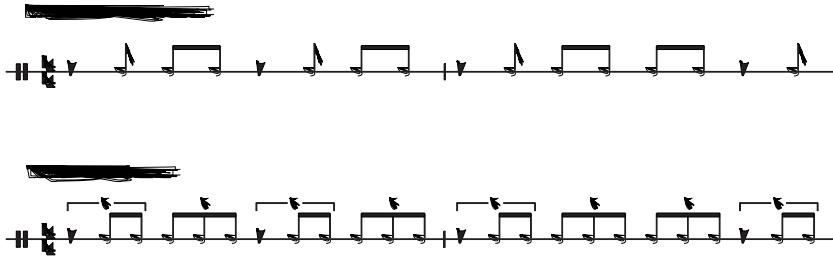
Example 3.8.2 demonstrates how to perform a complementary rhythm. Te instructor performs a short rhythm—composed or improvised, such as the two-bar rhythm shown; students respond by clapping, stepping, or intoning back the complementary rhythm in quarters.

Rather than repeat back the given rhythm verbatim (as in a simple imitation exercise), students respond on beats two and four in the frst measure, and on beats two and three in the second measure. In other words, the complement always follows the initial attacks of the given rhythm. Complementary rhythms can be performed using other subdivisions as well, as shown in Example 3.8.2a.

For a more advanced version, students realize the rhythm and its complement simultaneously, either with a partner or alone. For example, with a partner, one person performs the rhythm while the other performs the complement. It is best for partners to face one another when performing complementary rhythms. Create a dialogue with one another by playing of of each other’s positive and negative rhythms. If performed alone, intone the rhythm and clap the complement, or clap the rhythm and step

Example 3.8.2. Positive and negative complementary rhythms.

Example 3.8.2a. Eighth and triplet complements.



the complement. Complementary rhythms can also be performed while reading notated rhythms to develop rhythmic accuracy.[59]

Performing unplayed beats activates the "dormant space" lying beneath the rhythm's surface. Rhythms take on a vibrancy that is remembered and used to enliven your sense of rhythm for future performance. As you perform the complement, pay attention to the beat's position in the metric grid, and nuance accordingly. Tat is, nuance negative crusic beats diferently from metacrusic and anacrusic beats. Te rhythm shown in Example 3.8.2 is simple; heighten the level of difculty by increasing the rhythmic complexity and measure numbers.

Exercise 3.8.3: Growing Measures

Purpose: Developing long-term memory; understanding rhythmic dictation.

Directions: Te instructor gives a one-measure rhythm for students to echo back featuring rhythms that have been covered. We recommend vocalizing or clapping the rhythm. Te instructor gives the same opening measure again but adds another measure to it. Students echo the two-measure rhythm until memorized. Te instructor adds a third measure to the rhythm, and so on. Students continue to echo back the rhythm. As a fnal step, students notate the rhythm and perform it. Increase the number of measures given to develop long-term memory skills.

Exercise 3.8.4: Disappearing Measures

Purpose: Developing rhythmic memory; forcing us to stay alert; strengthening concentration.

Directions: Te instructor plays a three-bar rhythm and asks students to start stepping (or clapping) the rhythm. Students perform the rhythm until it is learned. As students perform the fnal measure of the rhythm, the instructor calls out a measure number, “one,” “two,” or “three.” Students are to omit that measure in their next realization. For instance, if the instructor says “two,” students perform the rhythm again but omit measure two. Tis exercise forces students to execute a reconfgured rhythm on the spot. Increase the length of rhythms to four or more measures.

Exercise 3.8.5: Augmentation and Diminution

Purpose: Executing augmented and diminuted rhythms in real time.

Directions: Te instructor plays a rhythm and asks students to respond by performing an augmented version (twice as slow). Or the instructor plays a rhythm and asks students to respond by performing a diminuted version (twice as fast).

VARIATION A: Quick reaction—Te instructor plays a rhythm. On the last beat, the instructor calls out the cue “hop” for augment, and “hip” for diminute, upon which students either augment or diminute the rhythm.

VARIATION B: Conduct as you step rhythms that you augment and diminute on request. Tis is challenging (caution: not for the faint-hearted!). Te beat in your arms remains constant as your feet perform the given rhythm twice as slow or twice as fast.

Exercise 3.8.6: Ostinatos and Rhythms

Purpose: Coordinating diferent rhythmic streams between diferent limbs.

Directions: Disassociation exercise—Select a one-measure rhythm for students to step as an ostinato, such as quarter–two-eighths–quarter–quarter. As students step the ostinato, they are to clap another rhythmic pattern above it (one to two measures in length) in counterpoint. It takes time to coordinate feet with hands in this exercise, so repeat each rhythm several times until preformed with ease and expressive nuance. Te goal is to express both the gestural individuality of each line and the nuances that arise from their interactions.

Exercise 3.8.7: Setting a Text and/or Melody to Rhythms

Purpose: Realizing rhythmic nuance through the verbalization of speech rhythms.

Directions for setting text to rhythms: Work alone or in small groups. Each student or group sets words to the same rhythmic pattern (two or more measures in length). Te prosody of the text should correspond to that of the rhythm's accentual-durational pattern. Notate the rhythm and words and include diacritical markings in the score.

Groups take turns vocalizing their version of text for the class with expressive nuance. Te object is to experience how diferent texts can draw out diferent expressive nuances from the same rhythmic pattern.

Directions for setting melodies to rhythm: Each student or group composes a melody to the same rhythmic pattern (two or more measures in length). Notate the melody and include diacritical markings in the score. Groups take turns singing their melodies for the class with expressive nuance. Te object is to experience how diferent melodies interact with and infuence the dynamic profle of the same rhythm.

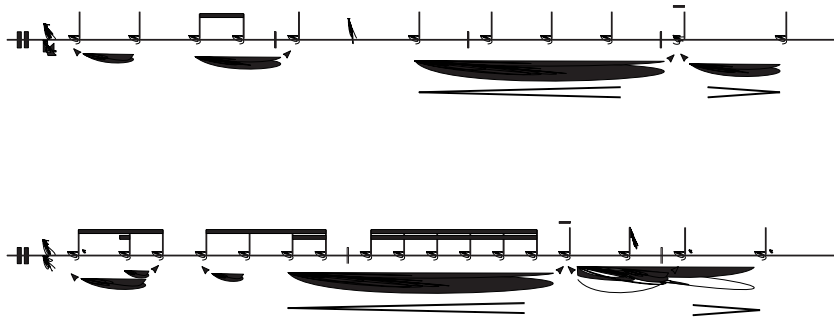
Analysis of Two Gestural Rhythms

Te two analyzed rhythms shown in Example 3.8.3 demonstrate the gestural tendencies and hierarchies that evolve in longer rhythms (three to four measures in length). Both rhythms feature rhythmic cells presented in previous sections, one in simple and the other in compound meter. View these examples as models for interpreting gestural tendencies in other similar rhythms you encounter in your studies.

Guidelines for Performing Gestural Rhythms

Dynamic Profles View the dynamic profles presented in Example 3.8.3 as one of many possibilities. More than one dynamic profle can exist within a single rhythm. Some rhythmic patterns exhibit a clear dynamic profle, whereas others are more ambiguous. More important, other musical variables, such as

Example 3.8.3. Gestural rhythms in simple and compound meter.



After Graybill, 1991, p. 34.

pitch contour, phrasing, and articulation, can infuence a rhythm's dynamic interpretation, as well as other historical and cultural stylistic factors.

Arrows, accent marks, and other diacritical markings are used to illuminate gestural tendencies, with the understanding that once learned, they are to be discarded. Te goal is to recognize and express gestural tendencies "living in" a musical passage without the aid of diacritical markings. Ultimately, as Graybill notes, "the musical impulse must arise from within the student and not from the diacritical marks themselves."[60] Refer to Appendix B for Dalcroze's rules of nuance, phrasing, and accentuation for additional expressive considerations.

Gestural Hierarchy A gestural hierarchy evolves automatically in longer rhythms, in which smaller gestural units are subsumed within larger ones and so on. In such cases, the largest gesture fows to and from a single focal point as shown in the tenuto marking placed above the staf. Ultimately, the performer must strike the proper balance between gestural levels by attending to subtle lower-level nuance while retaining the overall sweep and direction of higher-level gestures. As Graybill advises, "It is important to learn to emphasize and deemphasize the proper notes to project an intended hierarchy. The goal is to project a compelling well-nuanced gestural whole, i.e., 'a single energy fow.' "[61]

As mentioned before, there are several ways to perform gestural rhythms: vocalizing, clapping, stepping, gesturing, or any combination of these. As you learn the rhythm, strive to maintain a steady underlying pulse while expressing gestural infections. Tere is a tendency, at frst, to lose the metric pulse when incorporating the "looser" ebb and fow of a gestural rhythm. Avoid favoring one over the other or allowing for fuctuations to become so unbridled that you lose the pulse, or for the pulse to become so strict that you restrain or choke of the fow. Your goal is to strike a balance between a fuctuating musical fow against a frmly established metrical pulse (the yin and yang of irregularity and regularity). Strive for a gestural interpretation that is originally and authentically your own. Tis is one reason that moving to music is such a powerful tool: it encourages the participant to reach from within and allows for one's personal voice to emerge and develop—a hallmark characteristic of expressive artistry.

Point to Remember: Synthesize both aspects of rhythm—timing and fow—into your performance, by performing rhythms with time-point accuracy and expressive nuance.

Exercise 3.8.8: Gesturing Memorized Rhythms

Purpose: Promoting interpretative experimentation and articulatory refnement; attuning us to myriad movement qualities living within a single musical gesture; cultivating our artistic voice

Directions: Create an expressive movement and/or vocalization to a memorized rhythm—four or more measures in length in any meter using a prescribed set of note values. Incorporate expressive markings into the score that best capture the expressive nuances you will portray in your realization. First, memorize the rhythm and create your own movement realization (either in class or as a homework assignment). Your movement should represent accurate timing, as well as gestural fow and expressive artistry. Movement realizations can be performed in place or through space involving the entire body: feet, legs, knees, hips, arms, hands, fngers, shoulders, torso, and head. For vocalizations, use words and/or nonsense syllables that correspond to the rhythm's surface articulations, as well as overall sweep. Diferent speech rhythms and phonemes draw out diferent nuanced articulations inherent in the rhythm.

Your personal gestural interpretation allows you to express a rhythm based on your individual temperament. Everyone takes a turn presenting his or her gestural interpretation of the same memorized rhythm to the class. Watching several diferent interpretations of the same rhythm unveils the varieties of expressive nuance and attitudes "living" within a single rhythm.

Notate the rhythm on the board, incorporating expressive markings that best capture the expressive nuances portrayed in select performances. Compare the similarities and diferences between two or three analyzed interpretations.

Guidelines for Improvising Gestural Rhythms

Improvising trains us to create spontaneous rhythmic patterns in the moment, an efective antidote for the kind of rigidity that can result from

overanalyzing. Te key is to be in the musical moment and experience the rhythm fully. Dalcroze elaborates:

> Te exactitude and promptitude of the execution depends on the utilization of acquired bodily automatisms, and on the development of the faculties of psychic concentrations. Te mind has no time to record all the elements of the musical rhythm: Te body expresses them before the brain has even a clear idea of them (… a phenomenon identical with that of verbal expression).[62]

Allow your body to take the lead, which trains you to trust and think with your body!

Exercise 3.8.9: Echoing Improvised Rhythms

Purpose: Developing acute listening and imitation skills and articulatory refnement. Formation: Stand in a circle facing one another.

Directions: Begin by asking someone in the circle to establish a solid metric pulse in any meter for everyone to internalize. Students take turns standing in the middle of the circle improvising short rhythms (two to four measures in length)—the call. Te group repeats back the rhythm in time— the echo. Encourage students to capture the call's expressive character and nuance in their echo, which develops articulatory refnement.

Calls can be given in a number of ways, for instance, (1) vocalizing the call using a variety of sounds: nonsense syllables, clicks, slides, and so forth; (2) gesturing the call with body percussion and movements: stomps, slaps, shrugs, claps, and so on; and (3) drumming the call.

VARIATION A: Participants echo the call with a diferent infection, such as a bold fortissimo or pianissimo.

Instructor's Note

When the instructor is the leader frst in this exercise, it helps liberate students. Asking the group to echo a call that may appear silly makes the idea

yours and not theirs. It's easier for students to copy frst; once comfortable, they will feel freer to initiate calls themselves. Encourage students to emulate the expressive character of a given call in their echo. Do not accept lifeless, half-hearted attempts. When students give of themselves completely, they become less self-conscious.[63]

Exercise 3.8.10: Call and Response: An Improvisatory Conversation

Purpose: Fostering spontaneity and expressive musical communication; teaching us to respond instantly to a musical call with a logical answer; resting the critical mind; encouraging being in the moment; cultivating our artistic "voice"

Formation: Partners stand facing one another.

Directions: Work with a partner expressing short rhythms in a call and response. One person improvises a rhythm in any meter (two or more measures in length)—the call. Te partner answers back with a new rhythm— the response. Play of of each other's ideas, reacting to what the other does. In other words, engage in a spontaneous rhythmic conversation! Rhythms can be performed in a variety of ways—vocalized, clapped, drummed, or gestured.

VARIATION A: Add parameters to the call and response. For instance, the call could be a question (i.e., a rhythm that increases in activity, inviting continuation), and the response a closing rhythm (i.e., a rhythm that slows down, inviting closure).

9. Cross- Rhythms and Polyrhythms

Introduction (to the Instructor and Students)

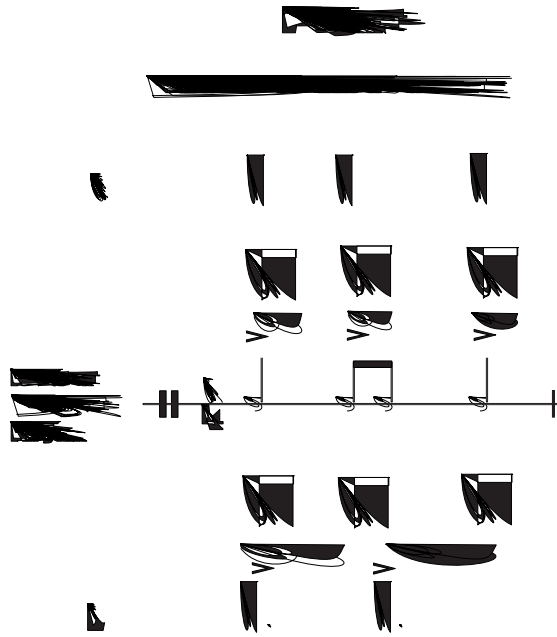
We begin by drawing a subtle distinction between the terms "polyrhythm" and "cross-rhythm." London defnes a polyrhythm as "two or more separate rhythmic streams in the musical texture whose periodicities are noninteger

multiples,"[64] for example, two eighths and a triplet, a triplet and four sixteenths, a quintuplet and septuplet, and so on. See Examples 3.9.1 and 3.9.2. A cross- rhythm occurs when one rhythm is played against the other. For instance, in Example 3.9.1, two dotted quarters are played against three quarters in simple triple meter, creating a cross-rhythm of twos against threes; the inverse occurs in Example 3.9.2: three quarters are played against two dotted quarters in compound duple, creating threes against twos. Te resultant (or composite) rhythm is a polyrhythm shown in the middle of each example. Note in both cases that the resultant (composite) rhythm is a palindrome!

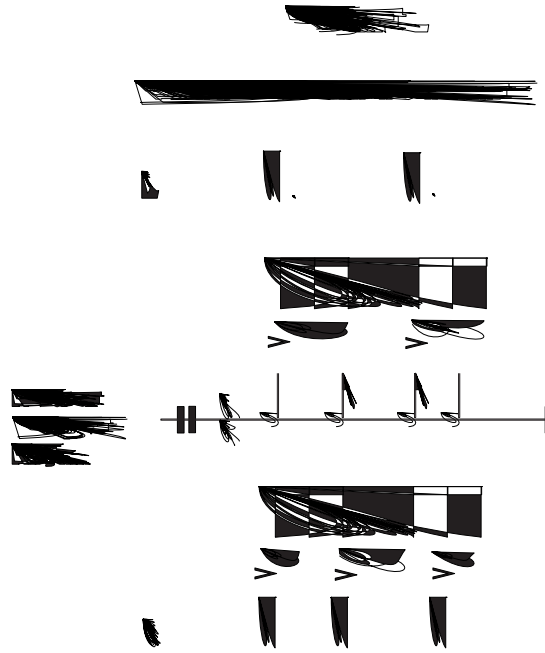
Introducing Cross-Rhythms (to the Instructor)

Given the rhythmic complexity of cross-rhythms, we recommend introducing them either (1) by visual analysis, (2) by aural analysis, or (3) through movement (see Exercise 3.9.1, which follows the spiral of learning for learning cross-rhythms). We demonstrate these pedagogical techniques using two against three as our cross-rhythm; however, these techniques can be used to teach other cross-rhythms as well, such as threes against fours and so on.

Example 3.9.1. Simple triple meter—two against three.



Example 3.9.2. Compound duple meter—three against two.



1. Introducing Cross-Rhythms by Visual Analysis

Analyze notated cross-rhythms written on the board (see Example 3.9.1, which presents a two-against-three cross-rhythm in simple triple meter). First, determine the common denominator between both rhythms (we use the eighth note, but any note value could be used). Ten, demonstrate how to create three groups of two eighths with ties, as shown in the upper layer, and two groups of three eighths with ties, as shown in the lower layer. Ten, write the polyrhythm, that is, the resultant or composite rhythm in the center (the two cross-rhythms combined). Follow the same procedure for teaching three against two in compound duple meter (see Example 3.9.2).

2. Introducing Cross-Rhythms by Aural Analysis

Te instructor can also introduce cross-rhythms aurally by performing twos against threes or threes against twos at the keyboard, or by playing recordings of music featuring cross-rhythms (e.g., Chopin's Tere Nouvelles Etudes B. 130, no. 2). Students are to determine what is happening rhythmically by listening, and then notate the rhythms as a class.

3. Introducing Cross-Rhythms through Movement

Te following exercise introduces cross-rhythms through movement. Tis exercise is best performed through space but can be performed in place if space is limited.

Exercise 3.9.1: Stepping Twos and Clapping Threes

Purpose: Multitasking; feeling the dynamic interaction of a cross-rhythm within the space of your body.

Formation: Scatter yourselves randomly about the room in the ready position.

Directions: Tis disassociation exercise trains students to step and clap twos against threes with ease. It begins with the instructor playing eighth notes (twos) at the keyboard in the bass register at an andante tempo. Students begin stepping the eighth notes. Ten the instructor layers triplets in the upper register above the eighth notes. Students respond by clapping the triplets (threes) while continuing to step the eighths (twos). We also recommend that students recite out loud resultant sayings, such as “hot-cup-of-tea” or “George-Wash-ing-ton,” as they step and clap to coordinate hands and feet. After students have stepped and clapped the cross-rhythm, notate and analyze it on the board. Determine the common denominator and resultant rhythm, as shown in Examples 3.9.1 and 3.9.2. Ten return back to moving to the rhythm with a renewed analytical understanding. (Rhythms also can be stepped and drummed or stepped and tossed.) For many students, it feels more comfortable to realize cross-rhythms frst by stepping twos and clapping threes, because of the natural binary division of our walking pattern.

VARIATION A: Repeat the exercise stepping threes and clapping twos, which for some is not as natural to execute. Again, the exercise begins with the instructor playing triplets in the bass register, and students respond by stepping triplets. Te instructor layers eighth notes (twos) in the upper register, and students clap eighth notes against triplets stepped with their feet.

VARIATION B: Swap twos against threes between feet and hands every two measures until you can switch efortlessly. Practice in silence and to music. Quick reaction—Begin by stepping twos and clapping threes. On the instructor's cue "hip," students swap rhythms between hands and feet.

VARIATION C: Students step cross-rhythms with a partner. Walk side by side; one person steps threes while the other steps twos. Strive to create a precise interplay between the two rhythms.

VARIATION D: Once adept at performing twos against threes and threes against twos, learn to step and clap other cross-rhythms, such as threes against fours, and fours against fves, following the same analytical and movement procedures.

Instructor's Note

Suggestions for Accompanying Cross-Rhythms When introducing a cross-rhythm (e.g., two against three), it is useful to diferentiate the two rhythmic streams in your accompaniments. This can be achieved by contrasting several musical elements between the hands, such as register, texture, articulation, dynamics, and tonality. For instance, left-hand twos could be played forte and legato in the lower register against right-hand threes played piano and staccato in the upper register. Obviously, the more differentiation between rhythms played, the easier it is for students to aurally discern them. As students become more adept at performing the cross-rhythm, lessen the contrast between rhythms in your accompaniment, and let the cross-rhythm speak for itself.[65]

Introducing Cross-Rhythms in Place For smaller classrooms, we recommend the following methods for performing cross-rhythms in place: (1) intoning and tapping rhythms across your chest, (2) tapping both rhythms on your chest, and (3) patsching cross-rhythms with your hands along each side of your body.

As mentioned, cross-rhythms can be introduced analytically (visually and/or aurally) or experientially through movement. We suggest interweaving the two approaches to synthesize an intellectual with an experiential understanding.

Guided Analysis of Cross-Rhythms: After having experienced and analyzed the concept of simple cross-rhythms, expand the concept of two against three and three against two further using diferent meters and common denominators, such as quarters and half notes.

Exercise 3.9.2: Ensemble Counterpoints for Cross Rhythms

Perform the following exercises with the instructor or a partner, or between two groups.

Directions: Partners or two groups face one another. Clap or drum cross-rhythms with each other. For instance, one person performs twos against the other's threes, and vice versa.

VARIATION A: Convert into a quick-reaction exercise. On the instructor's cue "hip," swap rhythms.

VARIATION B: Turn your backs to one another and perform the cross-rhythm relying solely on your ears.

Instructor's Note

Try circle tapping Cross-Rhythms. See Exercise 3.7.3 for directions, and replace syncopated rhythms with cross-rhythms.

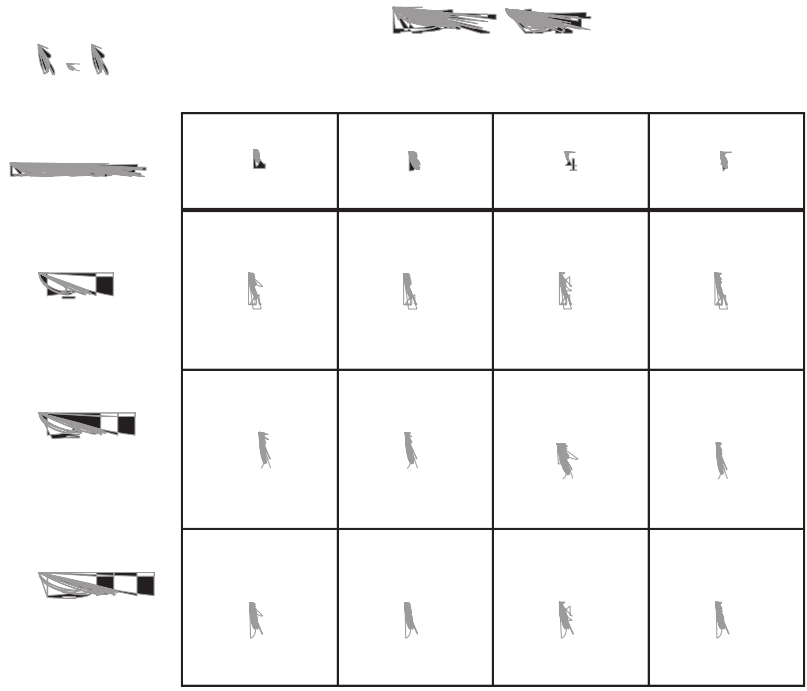
10. Changing Meter

Refer to the meter chart in Example 3.10.1 for all changing meter exercises. Commit the chart to memory.[66]

Refer to Section 11: Uneven Meters: Warm-Up Exercise for a good preparatory exercise for learning changing meters.

Exercise 3.10.1: Conducting Combined Simple Meters

Example 3.10.1. Meter chart.



Purpose: Switching into diferent meters with fuency and expressive ease.

Directions: Conduct duple, triple, and quadruple simple meter patterns back to back to adjust quickly to diferent metric fow patterns with ease.

VARIATION A: Convert to a quick-reaction exercise—Te instructor calls out a number, “two,” “three,” or “four.” Students conduct the meter called out until the instructor calls out another number.

Exercise 3.10.2: Swinging and Dictating Changing Meters

For the following exercise, use Swing Patterns (introduced in Part II: Section 2: Meter: Tree other ways to physically represent meter in

place (3) Swing patterns), which are particularly efective for beating time in changing meter exercises.

Purpose: Aurally recognizing, performing, and notating a change of meter with ease.

Formation: Students stand in a circle facing one another or stand in a circle facing outward. Standing inward allows students to watch one another while learning the changing meter pattern being played. Facing outward forces students to determine the pattern on their own by relying solely on their ears.

Preliminary Instructor's Note for Dictating Changing Meters

For changing meter exercises, select meters by moving horizontally, vertically, and/or diagonally across the chart to establish diferent meter changes to present to the class. Refer to meter chart in Example 3.10.1.

For example:

1. Moving horizontally across the chart creates simple meter changes. Consequently, the duration of the main beat remains constant. (We recommend starting with simple changing meters.)
2. Moving vertically in the chart creates changes between simple and compound meters. Note that in a vertical move, both simple and compound meters share the same number of beats. Tere are two ways to present a change from simple to compound meter. Either (a) the eighth-note subdivision stays constant (often indicated in the score as eighth = eighth), in which a constant subdivision expands the dotted quarter by one eighth, producing a slower compound main beat, or (b) the main beat stays constant (indicated in the score as: quarter = dotted quarter), in which a constant main beat produces faster subdivisions in the compound meter, to accommodate the thrice-stated eighths of the dotted quarter.
3. Moving diagonally across the chart presents changing simple and compound meters in which both the number of beats and the duration of the main beat change.

Directions:

1. Changing Simple Meters (A Horizontal Example): 2$to 3$

Te exercise begins with the instructor performing music at the keyboard—composed or improvised—that presents two simple changing

meters, for instance, one measure of duple and one measure of triple. Play the pattern several times, giving students a chance to determine the meters and conduct them with the correct combination of corresponding swing patterns (introduced in Part II: Section 2: Meter: Tree other ways to physically represent meter in place: (3) Swing patterns). If students are unsure of the meters being played, ask them to experiment by "trying on" diferent swing patterns until one "clicks." Once all students know the pattern, continue playing several repetitions to give students the opportunity to internalize the feel of the changing pattern. Encourage students to count out loud or silently as they swing the pattern. If the pattern involves a repeating surface rhythm, ask students to notate the rhythm on the board once they have fgured it out.

2. Changing Simple Compound Meters (A Vertical Example): Duple: 2$to 6*to 2@

Beat these three meters with a duple swing pattern and follow the directions given previously for dictating changing meters. Present the rhythm in two ways:

a. Subdivision constant: eighth = eighth. Te main pulse expands with each meter to accommodate the additional eighth note. Te duple swing pattern will slow down accordingly for each meter.
b. Main pulse constant: quarter = dotted quarter = half. Subdivisions move faster with each consecutive meter. Duple swing pattern will move at the same rate for each meter.
3. Triple Changing Meter Pattern: 3$to 9*to 3@

Te change from 3$to 9*to 3@creates a changing meter pattern that uses a triple swing pattern. Present both ways—with a constant subdivision and constant main pulse—and follow the directions given previously for dictating changing meters.

Instructor's Note

Giving Rhythms: Once students are adept at determining two changing meters, play patterns incorporating three different meters, and so on. Play repeated sequences of the same pattern: for instance, 4$, 9*, 2@; 4$, 9*, 2@; and so on, until the majority of students are beating
with the correct combination of corresponding swing patterns. If the

pattern involves a repeating surface rhythm, ask students to notate the rhythm on the board once they have figured it out.

Accompaniment Tip for Changing Meters: To help students aurally clarify the exact point of a meter change, change a musical element in the accompaniment directly with the change of meter, such as pitch, harmony, register, texture, and articulation. Once students are adept at recognizing the meter change, discontinue highlighting the change in the accompaniment; in other words, let the meter change speak for itself, without the aid of additional musical elements.

11. Uneven Meters

Introduction (to the Instructor and Students)

Swing patterns are efective for counting and feeling the herky-jerky changes in duration featured in an uneven meter.

- 5*: Use the duple swing pattern. Feel the elongation of the dotted quarter in your swing. Or use the quintuplet swing pattern demonstrated in Section 2: Meter. See the Companion Website.
- 7*: Use the triple swing pattern. Feel the elongation of the dotted quarter in your swing.
- 9*: Use the quadruple swing pattern. Feel the elongation of the dotted quarter in your swing.
- 11*: Use the quintuple swing pattern. Feel the elongation of the dotted quarter in your swing.

Exercise 3.11.1: High-Fives on Beat Five

Purpose: Feeling uneven metrical patterns; Negotiating time and space to meet up with someone on cue.

Directions: Refer to Chapter 2: Warm-Up 2b: High-Five, and apply the following variations to the exercise for learning uneven meters.

VARIATION A: Students step the music being played in an uneven meter by the instructor—improvised or composed—and meet up and high-fve one another on the last beat of each metrical unit. For instance, in 5*, movers meet up and high-fve one another on beat fve, the last beat, of each measure. In a 7*meter, movers high-fve one another on the seventh beat of each measure, and so on.

VARIATION B: Students meet up and high-five one another on the last beat of a series of two uneven changing meters, for example, on beat five of a 5*meter group followed by beat seven of a 7* meter.

Exercise 3.11.2: Traveling Uneven Meters

pping

Purpose: Performing uneven metrical rhythmic patterns in an ensemble setting; performing (excitation) and waiting your turn (inhibition).

Formation: Stand in groups of three to fve about two to three feet apart facing inward in a circle.

Directions: Students pass the beats (clap or drum) of a predetermined rhythm around the circle. Notate the rhythm on the board. Example 3.11.1 features a rhythm in 5*.

Tere are three ways to pass the rhythm: (1) each person takes turns performing one measure of the rhythm around the circle, giving emphasis to the opening crusis of each measure; (2) each person passes a single unit of two or three of the rhythm, which allows everyone to be aware of the crusis for each two or three grouping and to emphasize it accordingly; (3) each person performs a single sound of the two-measure rhythm. Tis requires acute listening skills to efectively nuance groupings of twos and threes divided up

Example 3.11.1. Rhythm in 5/ 8.

among participants. Count out loud or silently, and bend your knees as you pass beats. Experiment with diferent tempos, dynamics, and articulations.

VARIATION A: Once adept at passing rhythms while facing one another inside the circle, stand outside the circle facing away from one another and pass the rhythm. Doing so forces you to rely solely on your ears. Strive for a steady, well-nuanced performance.

Exercise 3.11.3: Palm to Palm with a Partner

Purpose: Learning to adjust to the juxtaposition of irregular groupings in uneven metrical patterns with fuidity and ease.

Directions: Stand in front of your partner close enough that you can touch one another's palms, but with enough room to push and pull your arms back and forth with ease. Represent irregular groupings by pushing one palm forward and the other back from left to right with your partner. For instance, to establish a two + three + two pattern in 7*, push one of your palms forward on the one of two, then push the other palm forward on the one of three, followed by the other palm forward on the one of two. In other words, initiate each grouping of two or three with the alternate hand. Show diferences in dynamic fow between rhythmic groupings by giving more stretch through the longer three. Coordinate two or more measures incorporating diferent series of divisions (and eventually diferent meters).

VARIATION A: Palm to palm a piece played in an uneven meter, such as Dave Brubeck's "Rondo alla Turk," which is based on a recurring pattern of three 7*bars + one 9*bar. Sing the melody on any syllable as you pulsate the changing pattern of twos and threes in your arms with your partner.

Instructor's Note

Palm to palm is also a good exercise for feeling the uneven pulsations in changing meters and additive rhythms.

12. Additive Rhythms

Introduction (to the Instructor and Students)

Additive rhythms are constructed by joining together a series of unequal lengths of time: a chronos protos—that is, the fast main beat combined to create different-sized groupings of durations through addition (rather than subdivision), such as three + two + four + eight and so on.[67]

Preparatory Exercise 3.12.1: Turning on a Dime

Purpose: Learning to "change gears" in a series of beats of uneven length.

Formation: Te entire class or small groups (three to fve students) stand in line shoulder to shoulder facing forward in the ready position.

Directions: First, establish a collective pulse. As a group, walk shoulder to shoulder in a synchronized fashion forward and backward to a series of predetermined beats of any length. For instance, walk forward six steps, walk backward four steps, walk forward two steps, walk backward one step, snap one beat, and then repeat the pattern. Count out loud or silently as you walk shoulder to shoulder. Try other series of numbers in other patterns. For example, walk forward eight steps, turn around and walk fve steps, turn around and walk three steps, turn around and walk two steps, and then repeat the pattern. Create diferent patterns using uneven series of numbers to step, clap, and/or snap "on a dime." Make sure to maintain a steady pulse.[68]

VARIATION A: Ask someone in the class to improvise music for the performing group.

Exercise 3.12.2: Adding Additive Rhythms

Purpose: Aurally recognizing, counting, feeling, and performing the unpredictable irregularity of additive rhythmic patterns.

Formation: Sit on the foor scattered about the room.

Directions: Hand each student a stack of cards. Each card has a number written on it that combined make up the additive rhythm of the piano ostinato structuring Movement I: Liturgie de Cristal from Messiaen's Quartet for the End of Time. Te numbers (out of order) that make up the additive rhythm are: one 1, six 2s, fve 3s, four 4s, and one 8—a total of seventeen numbers. Ask students to place the cards face up in front of them. Play a recording of the piece and ask them to focus on the piano ostinato while tapping the sixteenth-note beat, that is, the chromos protos. Te ostinato is repeated many times throughout the piece, giving students a chance to hear and arrange all seventeen cards in the order of the additive rhythm.[69]

VARIATION A: Write the additive rhythm on the board, either with numbers or note values. Students step the additive ostinato rhythm to the music (through space or in place), feeling the irregularity of the additive rhythm in each step. Show the duration of longer note values in your steps. If stepping the ostinato through space, change direction with each new iteration.

13. Polymeters

Introduction (to the Instructor and Students)

Realizing two or more meters concurrently between diferent limbs is a classic eurhythmics disassociation exercise, enabling us to internalize the interaction of two or more meters. It takes tremendous time and practice

to combine two or more meters successfully with fuidity and expressive musicality. Tere are numerous ways in which to express polymeters in the body. We recommend frst learning two diferent meters between the arms; once adept, try realizing three diferent meters between arms and feet. Performing concurrent meters requires keen concentration and limb autonomy to successfully preserve individual metric patterns with the utmost clarity and musicality. As Dalcroze states:

> Let us return to the conductor, who will express violence with one hand and tenderness with the other, and at the same time signalizes rhythms of diferent durations, and we have a perfect illustration of the combination of polyrhythm with polydynamics. It is essential that the rhythmtician should possess absolute freedom of limb.[70]

Special exercises enable students to contract a certain muscle in one arm while the same muscle in the other arm remains uncontracted. Other exercises show students how time may be subdivided in one way by one limb, and in another by a diferent one—for example, by the execution in a given time of three equal movements with the feet and two, four, or fve movements with the arms. Even more than the others, these exercises contribute to the development of concentration.[71]

Exercise 3.13.1: Realizing Two Simple Meters Concurrently

Purpose: Gaining limb independence; multitasking; gaining the ability to express the composite of two or more meters while preserving their individual character.

Directions: Realizing two meters in your arms—Beat two-four with one arm and three-four with the other arm. Once adept at performing each meter, switch arms. Perform with diferent tempos, dynamic levels, and articulations.

VARIATION A: Swap meters between arms every two measures. In other words, beat two measures of 3$with one arm and 2$with the other

arm and then switch. Continue switching every two measures until it feels automatic.

VARIATION B: Quick reaction—Students begin by expressing two diferent meters in their arms. On the instructor's cue "hip," they swap meters.

VARIATION C: Once you have mastered expressing duple and triple time simultaneously, graduate to expressing the more challenging meters of 3$and 4$, following the same sequence of exercises.

Exercise 3.13.2: Realizing Two Simple Meters and Hypermeter Concurrently

Directions: Conduct two diferent meters in your arms, and express the hypermeter in your feet by stepping in place or through space. Te challenge, of course, is to accentuate clearly the crusic beat of each meter in your arms and a two- or four-bar hypermetric pattern in your feet.

See Companion Website: Video Clip Example 1.7.

VARIATION A: Intone a rhythm with your voice as you conduct the two meters in your arms.

VARIATION B: Intone a rhythm with your voice, conduct the two meters with your arms, and step the hypermeter.

CHAPTER 4

Pitch, Scale, and Melody

In most conservatories, … pupils learn to read easily in every key (this after all is indispensable), but they do not learn to listen to music, to become more one with it.

— Jaques- Dalcroze, 1930, 121

OVERVIEW (TO THE INSTRUCTOR AND STUDENTS)

Tis chapter presents singing and ear training exercises derived from the Dalcroze method to develop tonal skills. Tese exercises assimilate easily into the traditional aural skills curriculum and target a number of vital skills and behaviors essential for good musicianship, including:

- Relative pitch
- Tonal centering, retention, and recall
- Sensitivity to scale degree function and functional transformation/ modulation
- Acute awareness of whole- and half-step patterns
- A contextualized understanding of intervals
- Singing, hearing, and improvising a modulation to any key
- Large-scale pitch associations
- Inner hearing, memory building, multitasking, mind-body connections, and concentration

Many exercises in this chapter are derived from Dalcroze's manuals, while others have been set forth by some of today's leading American Dalcroze eurhythmics practitioners. Tis is by no means a comprehensive treatment of his solfège/ear training method, which is far too vast in scope to cover in a single book, let alone a single chapter. Rather, it is a collection of exercises and games chosen specifcally to enhance the undergraduate aural skills curriculum, with the primary intent to provide a more embodied, holistic approach to singing and ear training.[1]

Eurhythmic-solfège (singing-movement) exercises are introduced to engage the body's vocal-muscular mechanism, allowing students to experience the dynamic interplay between vocalized pitch and physicalized rhythms. Methods for gesturing scale degrees are presented to heighten sensitivity to their inherent dynamic functions. Improvisatory exercises cultivate creative expression and encourage musical spontaneity. Quick-reaction, disassociation, and inhibition-excitation exercises (introduced in Chapter 1) awaken the muscular-nervous system, facilitate mind-body connections, and strengthen short- and long-term memory, multitasking skills, and concentration. Throughout the chapter, Dalcroze's rules of nuance, accentuation, and phrasing are applied to scales and melodies to elucidate the dynamic interaction between pitch and rhythm, which fosters expressive performance and score reading (see Appendix B for a complete list of the rules). The chapter ends with sight-singing and inner hearing strategies.

METHODOLOGY (TO THE INSTRUCTOR)

Exercises are presented in a graded though fexible order, allowing you to choose varieties of pedagogical strategies to develop specifc skills and create an active learning environment. Some exercises can be taught in a single class, whereas others need revisiting over the course of many class periods—even semesters, depending on the abilities and needs of the students. For instance, many relative pitch exercises require consistent practice (in and out of class) over extended periods of time for many students to master. Increase the level of challenge proportionately to the students' overall level of progress. Work toward mastery or near mastery of an exercise before moving on to a more challenging one. Most exercises are taught with students sitting in rows or in a half circle depending on the size of the class. We indicate if another formation is recommended.

SINGING SYSTEMS (TO THE INSTRUCTOR)

It is important to bear in mind that, even though Dalcroze used a fxed-do solfège system,[2] the primary goal of his method is to develop an acute sensitivity to scale degree function, or what we refer to as functional solmi zation: the ability to sing, hear, and feel any tone as a dynamic function.[3]

We recommend using a combined system that models both absolute and relative pitch relationships, such as fxed-do solfège and scale degree numbers or letter names and moveable-do; however, exercises are easily adaptable to any system or combination of systems. For our purposes, we use a combined system of fxed-do and scale degree numbers.[4] No matter what system(s) you use, the underlying goal is to provide a multisensory learning experience that engages the aural, visual, and kinesthetic sense, with an overarching emphasis on developing relative pitch and functional hearing, which, in turn, promotes expressive artistry.

Chapter 4 Exercises

1. Te Scale—To and From Tonic
2. Tonal Centering, Retention, and Recall
3. Relative Pitch and Scale Degree Function
4. Scalar Fragments—Te Scale's Inner Workings
5. Intervals—A Contextualized Approach
6. C-to-C Scales—A Comparative Study of Scales
7. Modulation—Strategies for Singing, Hearing, and Improvising
8. Sight-Singing and Inner Hearing Strategies

1. THE SCALE—TO AND FROM TONIC

Introduction (to the Instructor)

Tis section presents a variety of Dalcrozian strategies to enhance the learning of traditional major and minor scales to and from tonic (for other innovative strategies, see Section 4: Scalar Fragments and Section 6: C-to-C Scales).

Dalcroze viewed the scale as the primary source from which all other tonal elements are derived, including intervals, chords, dynamic function, and modulation. As he explains:

> Once the scales are mastered, the remaining musical studies … will be child's play, the pupil finding an explanation for every thing by reference

to the scales: intervals will be seen as fragments of scales, with intermediate sounds left out; chords as notes of a scale on top of one another; resolutions as the property given to notes of a scale left suspended to continue their progress; modulation as the linking of one scale with another. Everything relating to melody and harmony is implicit in the comparative study of keys, and becomes thereafter only a question of terminology and classification.[5]

Te following exercises develop an acute awareness of whole- and half-step patterning, sensitivity to scale degree function, and the ability to start from any position in the scale. Scales are also set in a variety of rhythms to assimilate their appearance in a musical context.

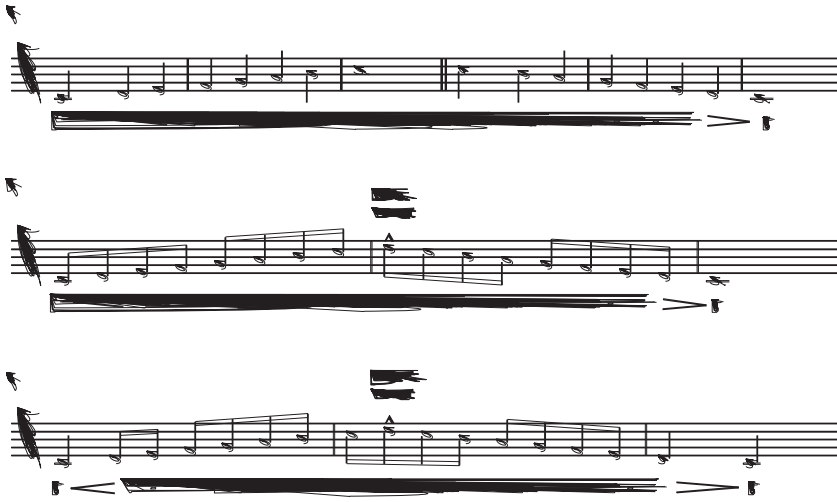
Exercise 4.1.1: A Nuanced Major Scale (to the Instructor and Students)

Te scale is a dynamic entity to be sung with musical intent. Refer to Example 4.1.1. Consider applying the following rules of nuance and accentuation:

- Nuance Rule #1
  a. All ascending melodies should be sung with a crescendo, which is to say by increasing the volume of sound on each note.
  b. All descending melodies should be sung with a decrescendo, which is to say by decreasing the volume of sound on each note.[6] Refer to Nuance Rule #11 for an exception to this rule.
- Accentuation Rule #5: Accent strongly, even on a weak beat, the highest note of a descending rhythmic group. An accent on a strong beat is called a metric accent. An accent on a weak beat is called a pathetic accent (or what is more commonly referred to today as a phenomenal accent).[7]

Point to Remember: Sing the scale with musical intent!

Example 4.1.1. Anuanced major scale.



From Jaques-Dalcroze, *Les gammes*, Vol. 1, p. 22.

Exercise 4.1.2: The Elastic Scale—Engaging the Kinesthesia

Purpose: Awakening the muscular/nervous system; coordinating vocal and muscular sensations; learning to control the incremental degrees of tension and release to and from a melodic highpoint.

Directions: Hold an elastic band (e.g., a bungee cord, nylon stocking, or Chinese jump rope) in both hands; stretch and relax the band to match the dynamic changes in your voice as you sing up and down the scale. Refer back to Example 4.1.1. Te cord should be taut, but not stretched, at the opening and closing tonics. Stretch the band to its widest at the scale's highpoint. Note the diference in dynamic profles between a metric versus pathetic highpoint; express this diference in your voice and body. Strive to meld the dynamic gradations of your voice with the muscular sensations of your body as you stretch and relax the band.[8]

VARIATION A: If you don't have an elastic band on hand, employ the fountain technique to engage the kinesthetic sense as you sing the scale to and from highpoints. See Chapter 6: Exercise 6.5b: Fountaining.

Rhythms for Singing Scales

Exercise 4.1.3: The Scale in Even Note Values

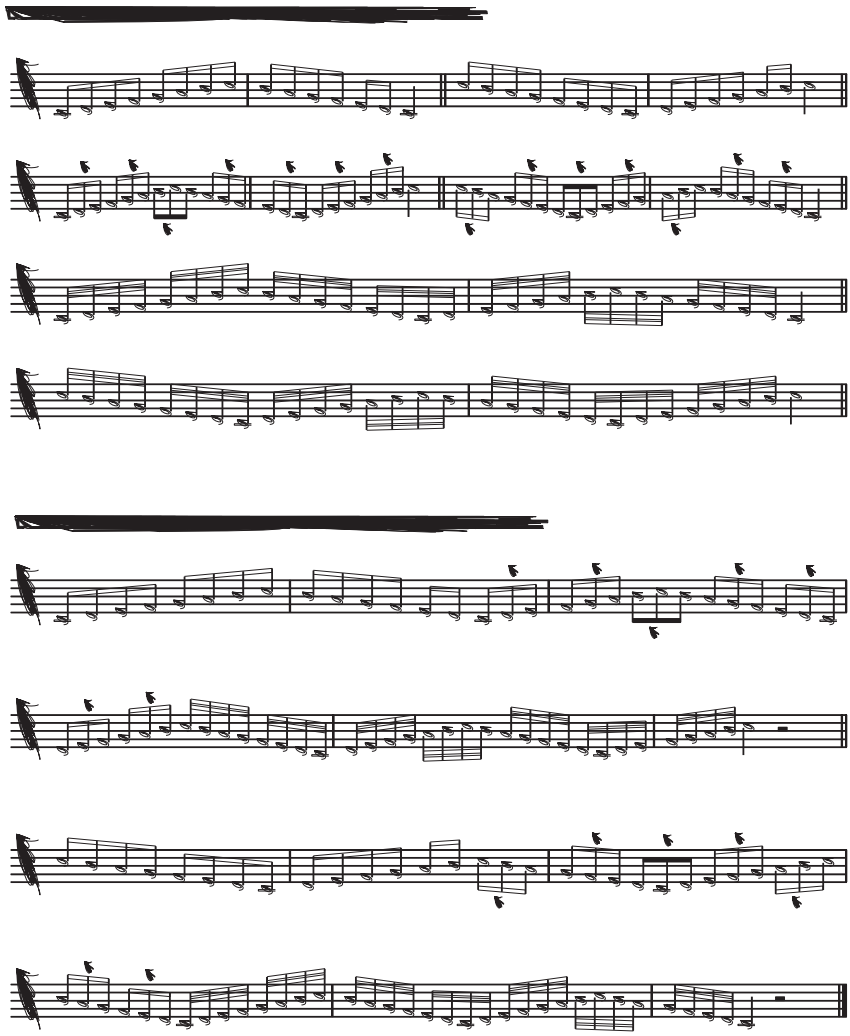
Purpose: Experiencing how the scale responds rhythmically and harmonically when set to diferent even note values.

Directions: Sing scales in the following even note values—eighths, triplets, and sixteenths. For each note value, sing up and down the scale until landing on a tonic that falls on a downbeat. Refer to Example 4.1.2. For instance, a scale cast in eighths reaches the fnal tonic on a downbeat after two iterations; a scale cast in triplets reaches the fnal tonic on a downbeat after three iterations. Start from both upper and lower tonics until fuent.[9]

Stress the frst beat of each rhythmical unit you sing to reinforce scale degrees that do not fall as naturally as others on strong beats—fnger snapping, clapping, patsching, or tapping your foot on downbeats also helps defne rhythmic groupings. Each note value yields diferent patterns of accentuation and harmonic implications. For instance, a scale sung in triplets calls for a diferent harmonization than a scale sung in sixteenths.

VARIATION A: Bass lines—Compose quarter-note bass lines to sing in duet with scales sung in eighths, triplets, and sixteenths. Bass lines reveal the harmonic implications that arise from each rhythmic pattern.

VARIATION B: Quick reaction—On the instructor's cue "hip," students sing twice as fast. In other words, if they are singing quarter notes, they sing eighths; if they are singing eighths, they sing sixteenths. On the cue "hop," students sing twice as slow.

Example 4.1.2. Te scale in even note values.

From Jaques-Dalcroze, *Les gammes*, Vol 1, pp. 14–15.

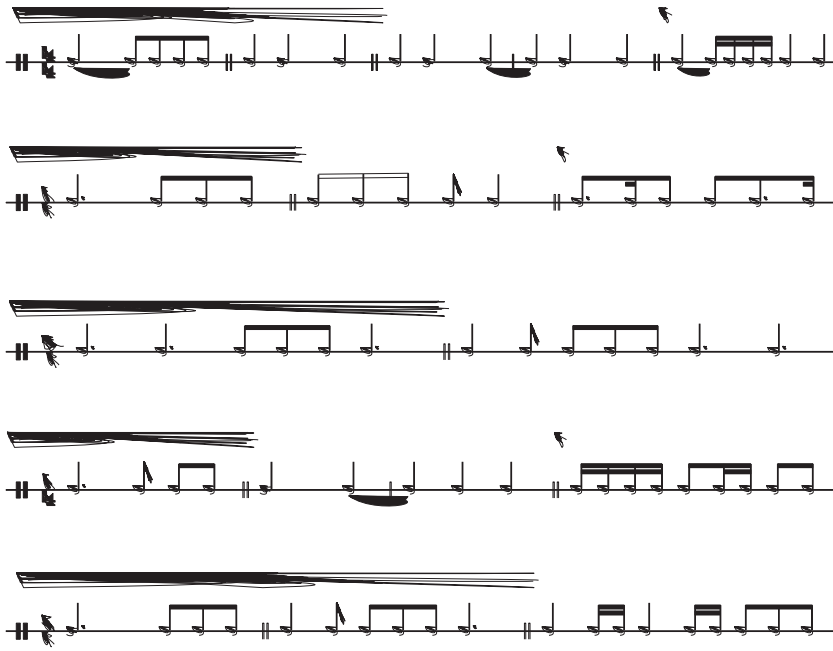
Exercise 4.1.4: Rhythmic Patterns

Purpose: Experiencing the scale in a variety of rhythms as they appear in a musical context.

Directions: Dalcroze recommends singing scales in a variety of rhythmic patterns. First, show the rhythmic pattern students are to apply to the scale. Rhythms range from one to two measures in length and are set in simple and compound time signatures. Students sing up and down the scale in a given rhythmic pattern until reaching a tonic that falls on a strong beat. Conduct as you sing. Example 4.1.3 shows a sampling of rhythmic formulas, many taken from the scores of rhythms Dalcroze composed for singing scales in his manuals.[10] Invent your own rhythms to set to scales.

Consider applying the following rules of nuance and accentuation to appropriate rhythms to encourage expressive performance (for other nuance and accentuation rules, see Appendix B).

- Nuance Rule #3: A prolonged note in an ascending passage receives a crescendo. If the note following descends, there is a crescendo followed by a decrescendo.
- Accentuation Rule #1: Accent strongly the last note of a measure if it is tied over to the frst beat of the following measure.

Example 4.1.3. Select rhythms for singing scales.

From Jaques-Dalcroze, Les gammes, Vol 1, pp. 16–21.

Exercise 4.1.5: Two against Three in Contrary Motion

Purpose: Coordinating two opposing melodic and rhythmic patterns, cross- rhythms.

Directions: In this advanced dissociation exercise, two partners face one another and sing the scale as a duet in contrary motion with cross-rhythms—twos against threes. One person sings a descending scale in threes from the upper tonic, against the other person's ascending scale in twos from the lower tonic.[11]

VARIATION A: Equal and unequal rhythms—For an even greater challenge, perform contrary scales in an equal rhythm of four against an unequal rhythm of fve. Tis exercise is not for the faint-hearted and requires tremendous practice.

Engaging the Kinesthesia

Moving through the Scale (to the Instructor and Students)

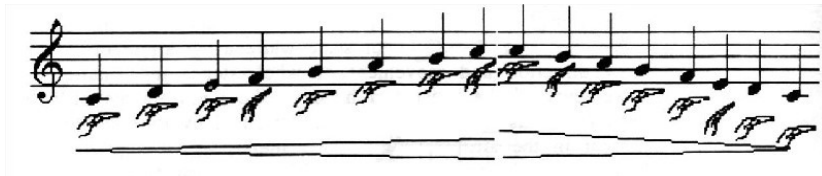
Tere are myriad ways to physically represent the scale. Earlier, we suggested using the stretch and release of an elastic band and the "fountaining" technique to vivify the scale's overall dynamic arc moving to and from tonic. Next we present two more exercises that engage the moving body to sensitize us to the functional relationship among scale degrees and subtle diferences in measurement between whole and half steps.

Exercise 4.1.6: Hand Gesturing the Scale

Purpose: Hearing, seeing, and feeling (through visual and kinesthetic images) the "measured spaces" between whole and half steps and the dynamic function of scale degrees.

Hand Gestures: We suggest the following arm/hand gestures (see Example 4.1.4) but encourage you to invent others as well. Strive to create kinesthetic gestures that correspond to the dynamic quality of the tones you sing. Avoid making mechanical, thoughtless movements with the hand. As Abramson reminds us, hand gestures are to "produce a physical kinesthetic experience appropriate to the direction, distance, and function of the scale tones. In other words, the hand movements should be gestures rather than static positions."[12]

Directions: Designate an octave span directly in front of you—place the lower tonic somewhere near your waist and the upper tonic near your head. Commit to this space, remembering to always place each scale degree in the same position with your hand.

Example 4.1.4. Major scale hand gestures.

From Abramson, Music as a Second Language, p. 72.

Sing a major scale as you gesture each whole and half step with your hand—show whole steps with fattened fngers, half steps with a raised hand bent at the wrist (refer to Example 4.1.4). Switch hands to activate both sides of the brain while doing this exercise.[13]

Guided Analysis: Not all half steps are created equal! Half steps appear equidistant to one another on the staf, but not so in the gravitational tonal feld. Te "width" between half steps varies depending on several factors: (1) their position in the scale, (2) their direction, and (3) their harmonic underpinnings. For instance, in the major scale, an ascent from 7 to 1 feels "closer" (due to 7's active pull to tonic) than a descent from 1 to 7, which feels "wider." A descent from 4 to 3 feels "closer" (due to
4's gravitational pull to 3) than an ascent from 3 to 4. See Example 4.1.5. As you sing up and down the scale, listen for and gesture these subtle diferences in "size" with your hand to develop sensitivity to the subtle diferences in "spatial distance" between scalar half steps. Coordinating physical movements with your voice deepens the visceral impression of each half step, sensitizing you to their subtle diferences in size and afect.[14]

Example 4.1.5. Te varying distances between half steps.

From Abramson, Music as a Second Language, p. 73.

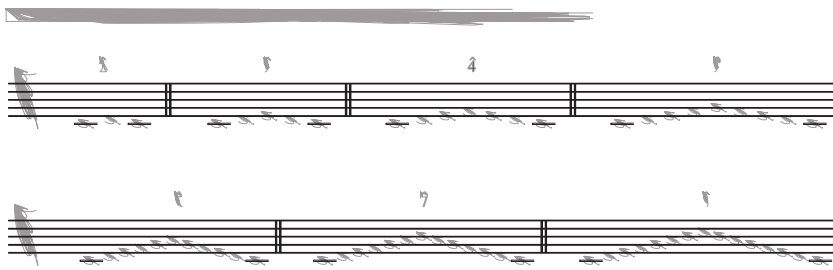
Exercise 4.1.7: Standing Up to the Scale

Purpose: Embodying scale degrees—magnifying the dynamic characteristics of scale degrees, that is, the varying degrees of energy, weight, balance, and direction—by linking physical postures to the singing of tones.[15]

Formation: Sit up straight on the edge of your chair in a balanced position, with your feet planted on the foor.

Directions: In this exercise, students sing and physically mark the position of each scale degree to and from tonic in a series of sitting-to-standing postures, creating a dynamic link between tonal and physical gravitational force felds. See Example 4.1.6. Sing the scale on scale degrees or solfège either unaccompanied or to a harmonic accompaniment performed by the instructor (basic diatonic harmonies will sufce). Posturing scale degrees vivifes through kinesthetic sensation their sonic function,

Example 4.1.6. Scalar patterns to sing and stand through the scale.



thereby heightening our sensitivity to varying degrees of energy, weight, balance, and direction.[16]

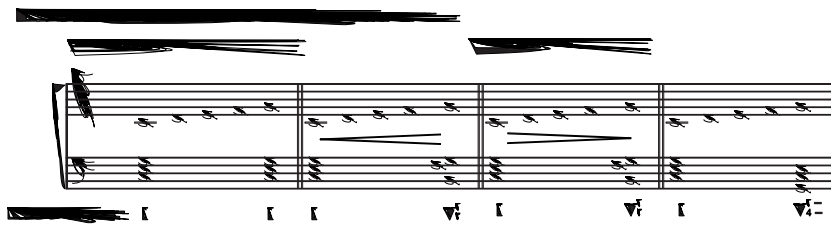
Moving from tonic to supertonic: Sing from tonic up to 2 with a slight crescendo while lifting of your chair (approximately two inches), and then sit back down singing 1 with a slight decrescendo. Note the efort it takes to ascend of, versus back into, the gravitational weight of tonic (for this reason, 2 is often referred to as the upper leading tone).

Moving from tonic to mediant: Sing by step from tonic up to 3 and partially stand, and then sing and sit back down to tonic with a slight diminu endo. Note the ease of moving to the more stable 3, buoyed by the rising energy of 2. As you descend, intensify your desire to return to tonic with a slight ritard.

Moving from tonic to subdominant: Sing and move up to 4 into a position with slightly bent knees, and then sing and sit back down to 1. Note the dynamic diference between ascending to, versus descending from, 4. Feel 4's tendency to droop back into 3. Again, ritard as you descend from 2 to tonic.

Moving from tonic to dominant: Sing and move up to 5 with knees almost straight to feel what Zuckerkandl refers to as the dominant's "knife edge" pulling to tonic's upper and lower gravitational poles (see guided analysis of the dominant next).

Guided Analysis of the Dominant: Harmony has a tremendous infuence on the dominant's dynamic direction. See Example 4.1.7. For instance, (1) when supported by a tonic I chord, it is relatively stable; (2) when supported by a dominant seventh chord, it is relatively unstable, tending to point upward when accompanied with a crescendo and downward with a decrescendo; and (3) when supported by a cadential six-four, it tends to point downward. Play the following harmonizations shown in Example 4.1.7, and ask students to create vocal infections and postures that refect the dominant's directional tendencies in each setting.[17]

Example 4.1.7. Dominant harmonizations.

From Abramson, *Music as a Second Language*, p. 76.

Moving from tonic to submediant: Sing and move up to scale degree 6 into a standing but relaxed stance, and then return back to tonic. Note the ambiguous nature of the submediant; as a tone caught in the momentum of the ascending scale, it becomes attracted to the nearby gravitational pull of tonic, yet it also wants to fall back into the preceding stability of the dominant and act as a relaxed upper neighbor, as it often does.

Moving from tonic to the leading tone: Sing and move up to the leading tone. Stand and reach your arms halfway up in the air to represent the "almost there"; then return back to tonic.

Moving from tonic to tonic: Sing and move up to the upper tonic to complete the scale. Stand erect with arms fully extended above your head to represent the fulfllment of reaching the octave goal, and then return back to tonic.

VARIATION A: After moving and singing up the scale from the lower tonic, practice singing and moving down the scale from the upper tonic. Note the decrease in pull as tonic moves down to 7 when it no longer acts as a leading tone. Te dominant also feels diferent in a descending scale (we recommend harmonizing it with a tonic rather than dominant chord). A descending 2 now functions with less ambiguity as an "upper leading tone." Musically express its need to resolve with a fermata and ritard before resolving to tonic.

Guided Analysis: Share metaphors with one another to describe the embodied sensations experienced as you sing and posture tones.

Summary of Scale Degree Functions

Te following list summarizes the function of scale degrees in the major mode.[18] Bear in mind that in a musical context, many other factors such as meter, rhythm, and harmony infuence—even contradict—a tone's innate function. View these descriptions as a launching point from which to understand more complex subtleties of function that arise in an actual musical context.

Tonic: A gravitational platform—balanced, stable, weighted.

Supertonic: Pulls upward when ascending from tonic, falls downward when descending acting as an upper leading tone to tonic; an ascending 2 requires greater efort when lifting of of versus backing into the gravitational weight of tonic.

Mediant: Relatively stable; somewhat balanced, relaxed.

Subdominant: Almost the dominant, points to the dominant when ascending, tends to droop back into the mediant when descending.

Dominant: On the "knife's edge," pulls either direction between the two gravitational poles of tonic; can be relatively stable or unbalanced depending on its harmonization (see Guided Analysis of the Dominant earlier).

Submediant: Simultaneously pulls up to the leading tone and back down into the dominant (as an upper neighbor).

Leading tone: A very active tone that pulls up to tonic when ascending; is less active descending from tonic.

Quick-Reaction and Inhibition-Excitation Scale Exercises

Tis next group of exercises, (1) Leapfrog, (2) Gapped Scales, (3) Target Practice, and (4) Embellishing the Scale, develops inner hearing and trains you to sing the scale starting from any scale degree.[19]

Exercise 4.1.8: Leapfrog

Purpose: Entering and exiting on diferent positions in the scale; interacting with another part as in an ensemble setting.

Directions: In this exercise, partners or two groups face one another and take turns leapfrogging from one note to the next up and down the scale. For instance, Group A sings do, and Group B responds with re; Group A sings mi, and so on. Switch parts.

VARIATION A: Partners or groups leapfrog two-note patterns. Group A sings do-re, and Group B responds with mi-fa, and so on.

VARIATION B: Perform this exercise with your eyes closed, which forces you to rely solely on aural cues.

Instructor's Note

Encourage partners and groups to respond musically to one another as they sing, paying close attention to a tone's character based on its

position in the scale. Express the overall scale as one large phrase to and from tonic; experiment with diferent nuances in dynamics and timing.

Exercise 4.1.9: Gapped Scales

Purpose: Shifting between states of singing and silence; remaining poised for action during silence; developing inner hearing and functional audiation.

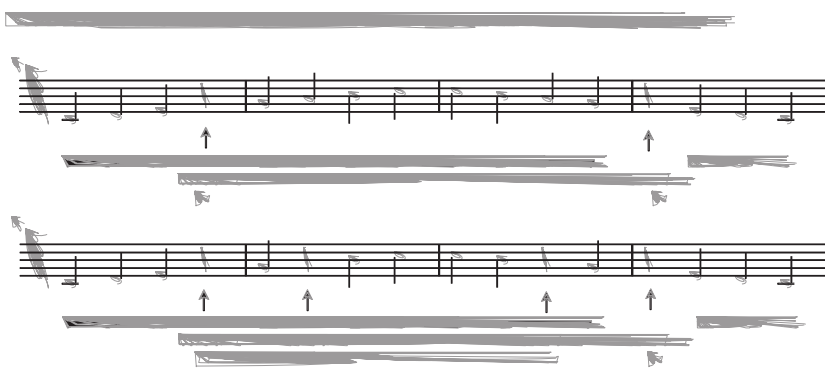
Directions:

STEP 1: To begin, students sing and hand gesture an ascending and/or descending scale to and from tonic at a comfortable tempo. Repeat the top tonic.

STEP 2: Te instructor asks students to sing the scale again, but to omit a scale degree, for instance, fa; see Example 4.1.8a. Students are to subvocalize (i.e., inner hear) the missing scale degree, which helps ingrain an audiated impression of it.

STEP 3: Te instructor asks students to sing the scale again, but to omit two scale degrees, for instance, fa and la (see Example 4.1.8b). Te instructor continues requesting tones to omit until students are left inner hearing the entire scale (see Instructor's Note later).

Example 4.1.8. Two examples of a gapped scale.



VARIATION A: Rather than calling out tones, notate the scale on the board and erase notes on the staf for students to omit.

VARIATION B: Convert into a quick-reaction exercise—Ask students to stop and start singing on a verbal cue. Students begin by singing the scale out loud. When the instructor says “stop,” students sing the scale silently in their heads. When the instructor says “start,” they resume singing the scale out loud.

Instructor’s Note

After a gap, some tones are more challenging to re-enter on than others. Repeat each gapped version of the scale until students re-enter with confidence. Insist on precise intonation. Some may overanticipate re-entry and come in too early, whereas others may come in too late. Insist on a re-entry that is precise in timing. Filling in the silence with a physical gesture (a snap, clap, step, or nod) helps students count out the entire length of a rest. If students are struggling, slow down the tempo.

Exercise 4.1.10: Target Practice

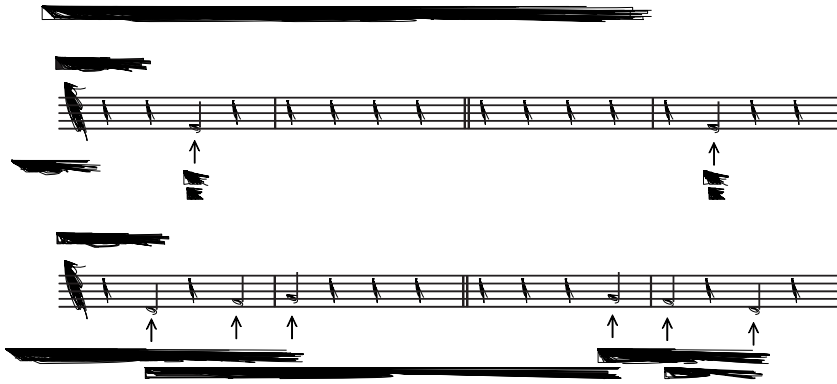
Target practice is the inverse of gapped scales. Rather than omitting tones, students gradually insert notes into a scale they inner hear and gesture.

Purpose: Developing your ability to retrieve and sing any random scale degree; developing inner hearing; maintaining a steady pulse; staying alert.

Directions: To begin, students silently sing an ascending scale up to tonic in a strict moderate tempo, marking the position of each scale degree with a hand gesture (see Example 4.1.9). As students reach the top tonic of the scale, the instructor calls out random scale degrees they are to sing out loud

at the correct time—such as mi, E, or scale degree 3. Once students are adept at singing a requested tone with confdence, the instructor calls out other random scale degrees for students to sing out loud, such as re, fa, and la.

Example 4.1.9. A targeted scale.



VARIATION A: After practicing targeted notes in an ascending scale, practice in a descending scale, and fnally with an ascending and descending scale; repeat the top tonic.

VARIATION B: Rather than calling out targeted notes, the instructor notates targets on the board by writing in one or more whole notes on the staf for students to sing. Place scale degrees above the staf to designate the eight positions of the scale under which you notate targeted notes.

Instructor's Note

Repeat targeted notes until students have assimilated them into the scale with accurate intonation and rhythmic precision. If students are struggling, slow down the tempo.

Exercise 4.1.11: Embellishing the Scale

Purpose: Discerning between structural and embellishing pitches; learning the art of motivic elaboration.

Directions: Refer back to Chapter 1: Exercise 1.2 for an example of a quick-reaction exercise that embellishes the scale with upper and lower neighbor notes. Elaborate the scale with other fgurations, such as double neighbors, chromatic neighbors, and so on.

A Final Note about Quick-Reaction, Inhibition-Excitation, and Disassociation Scale Exercises (to the Instructor)

Many types of quick-reaction and disassociation exercises can be applied to scales using a variety of verbal or musical cues. For instance, in his manuals, Dalcroze suggests the following disassociation exercises: (1) sing the scale forte while conducting pianissimo and (2) sing the scale in two while conducting in three.[20] Invent your own exercises to reinforce concepts and skills you are covering in class.

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2. TONAL CENTERING, RETENTION, AND RECALL

Tonality: "the particular way in which all tones relate to a fundamental tone, especially the fundamental tone of the scale."

—Schoenberg 1934, 1975, 270

Introduction (to the Instructor and Students)

Te concept of relating all tones to a fundamental tonal center can be grasped quite readily in the abstract, but to sing, hear, and, most important, feel this dynamic relationship in practice takes conscious work and time to develop. Te following exercises develop two aspects central to the development of relative pitch: (1) Tonal Retention and (2) Tonal Recall. Each exercise focuses on one or both of these interrelated skills simultaneously.[21]

Tonal Retention

Tonal retention refers to your ability to retain a pitch of reference (a tonal center) from which to relate all other tones, harmonies, and keys.

Retention exercises implant a tonal center into memory—the first step in setting up a navigational system that enables you to know your position at all times within the tonal hierarchy. Ideally, with an internalized tonic in place, you should never lose your tonal bearings; however, as some research suggests, there may be limits as to how long we can actually retain tonic, especially within the context of large-scale key relationships.[22]

As music psychologist Diana Deutsch points out, the ability to maintain a tonal center actually requires the mental processing of two pitches simultaneously, that is, the center being retained for reference and the melodic pitch present in your perception.[23] As a melody unfolds, there is a limit to how many pitches can be held in memory. Exercise 4.2.4 trains you to consciously retain one pitch while aurally remembering a series of other pitches.

Tonal Recall

Tonal recall refers to your ability to retrieve a pitch from memory after it has been sonically absent over a period of time. Whereas retention exercises implant a tonal center into memory, recall exercises develop long-term memory retrieval skills. Te following exercises train you to keep a center against varying degrees of opposition, and to retrieve a pitch unassisted over greater lengths of time. Tese skills come naturally for some students but for many other students require thoughtful, intensive practice.[24]

Instructor's Note

Tonal retention and recall exercises serve as good class openers. Choose and pace exercises according to the needs of the class. Some exercises take weeks, even months to master. Continue to stretch students' retention and recall capabilities by providing greater challenges throughout the semester. Students who struggle with retaining a center in class will need to practice these exercises outside of class. (Also see Section 3: Relative Pitch and Scale Degree Function for other exercises that develop these skills.)

For all exercises, students can identify the tonal center by letter name or solfège. For our purposes, we choose C as our referential pitch and identify it by letter name.[25]

Exercise 4.2.1: Keeping a Center against All Odds

Purpose: Internalizing a tonal center; deepening tonal retention by hearing through a distraction.

Directions: Tis interference exercise develops tonal retention by presenting graduated degrees of tonal opposition as students sing middle C in a short-short-long rhythm. Please refer to Chapter 1: Exercise 1.4 for directions to this exercise. To increase the level of interference, consider the following variations:

VARIATION A: Heighten the level of opposition by playing an atonal improvisation incorporating wide leaps, chord clusters, and erratic rhythms. Heightened oppositions attempt to pull students of of their center, which in turn strengthens the implanting process.

VARIATION B: Play excerpts of well-known pieces (which are especially difcult to "tune out").

VARIATION C: "A silenced center"—Once students are adept at retaining a center sung aloud, ask them to retain a silent audiated C as you play varying degrees of opposition. It requires tremendous concentration and practice to retain a silent tonal center against interference, which further deepens inner hearing and retention skills.

Instructor's Note

When introducing interference exercises, begin by providing consonant accompaniments with a few dissonant harmonies sprinkled in to create momentary oppositions to C. As students learn to resist these oppositions, increase the length and degree of dissonance by incorporating modulations to distant keys (as presented in Chapter 1: Exercise 1.4). Over time, students learn to retain a center through any form of interference, no matter how dissonant.

Te following two variations begin to develop relative pitch by having students relate individual pitches to a silenced tonal center.

VARIATION D: "Above or below"—Ask students to silently sing C while they hear pitches played above and below middle C at the

keyboard. Students are to verbally identify if the pitch they hear is higher or lower than middle C. After having identified several pitches, ask students to sing C out loud. If they have lost C, play an invitation to get them recentered (see Example 4.2.1 for Invitations to Tonic). Never give tonic away!

VARIATION E: "Melodic expectations"—Play short melodic phrases in C major or minor that seek resolution either up or down to the fnal "tonic." Ask students to complete the melody by singing stepwise to the nearest tonic with a sense of resolution that matches the expressive character of the melody played.

Exercise 4.2.2: Sing and Clap—While Retaining a Center

Purpose: Retaining an internalized center while performing another activity. As Abramson explains, the ability to inner hear as you write, clap, or read is a coordination (or disordination) that requires concentrated practice.

Directions: In this exercise, students provide their own interference while silently singing C, which develops their ability to retain an internalized tonal center while performing another activity. To begin, ask students to sing C in four quarters for one measure, then rest and clap for one measure. Remind them to silently audiate C through the rest as they clap. Increase the length of measures they rest and clap to stretch their tonal memory and recalling capabilities.

VARIATION A: For a greater challenge, students clap and converse with their neighbor for two or more measures (or an indefnite period of time) while retaining a silent C. Te instructor asks the class or individual students to stop their conversation and sing C out loud.

VARIATION B: Students clap and sing random pitches to one another for two or more measures while retaining a silent C. Ask the class or individual students to stop singing and sing C out loud.

Exercise 4.2.3: Recalling a Tonal Center

As students develop the ability to retain a center, ask them to recall C without assistance. Te following recall exercise is an efective class opener.

Purpose: Developing long-term tonal recall capabilities.

Directions:

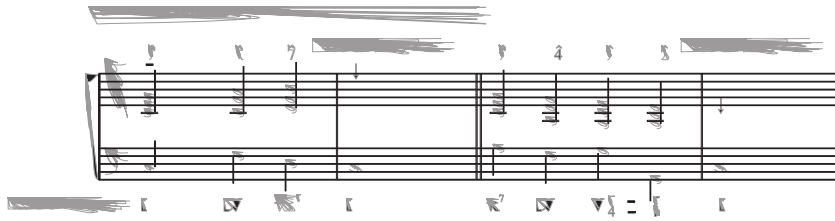
STEP 1: Ask the class to retrieve C silently from memory (students with absolute pitch are exempt from this exercise). Encourage students to subvocalize C and to recall the physical sensation of singing C out loud.[26] Once they have retrieved what they think is C, ask them to sing it out loud.

STEP 2: If students are not singing C, ask if they think their pitch is too high or too low, and repeat step 1.

STEP 3: If the class still has not found C, play one of the Invitations to Tonic, (see Example 4.2.1) and ask students to resolve the progression to a fnal note, that is, C. By resolving the progression, students now experience C as tonic, a stable tone of resolution.[27]

Invitations to Tonic

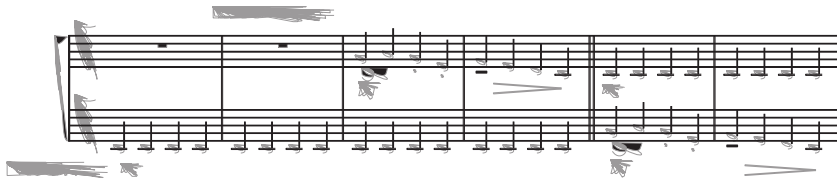
Play invitations expressively with varying degrees of dynamics and articulations. For instance, a crescendo intensifes the attractive tendencies of 7 pulling to 1, while a ritard and decrescendo reinforce the descending fall 2 into 1. Ask students to respond accordingly. See two possible invitations in Example 4.2.1.

Example 4.2.1. Two possible invitations to tonic.

Return to this exercise at diferent points throughout the class period, and ask the class or individual students to retrieve C without assistance. Gradually increase the interval of time between requests to stretch students' recalling capabilities. With continued practice, students are usually delighted by their ability to recall C unassisted.[28]

Exercise 4.2.4: A Counterpoint with C—Relating Tones to a Center

Purpose: Identifying the relative relationship of scale degrees to tonic. This exercise also teaches cooperative independence: the ability to hold on to your own part while listening to another.[29] Artistic ensemble playing requires not only a keen awareness of what the other musicians are playing but also knowing how your part interacts with theirs.

Example 4.2.2. A counterpoint with C.



Directions:

STEP 1: Ask students to sing middle C in a loop of eight beats in common time. Play a (well-nuanced) melody in counterpoint to their sounding C that starts on another pitch above and ends on C. See Example 4.2.2 for one of many possibilities.

STEP 2: After the instructor plays the melody, students immediately sing it back on a neutral syllable. Accompany students' melody with the

looped middle C. In other words, create an invertible counterpoint with their voices to reinforce the relative relationship between tonic and other scale degrees.

STEP 3: Ask students to sing the melody again, but this time with scale degrees, solfège, or letter names to clarify the relative position of melodic tones to tonic.

Students can physically designate the relationship of pitches to C with their hands by representing C (tonic) with a stationary fst and by contouring melodic pitches to and from tonic with their other hand open. Doing so provides a visual-kinesthetic image that measures the relative "spatial" distance of each scale degree to tonic.

Instructor's Note

At frst, introduce descending stepwise melodies starting above C, which are easier to discern. Ten introduce melodies that start below and/or intersect with middle C.[30]

VARIATION A: Use other pitches besides C as a tonal center. For instance, F, G, and A are good centers for most vocal ranges to sing back melodies played beneath tonic.

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3. RELATIVE PITCH AND SCALE DEGREE FUNCTION

Introduction (to the Instructor and Students)

Relative pitch exercises develop an acute awareness of scale degree function and train you to know your position at all times in the major and minor tonal system. Te ultimate goal is functional solmization: the ability to sing, hear, and feel instantly any tone as a dynamic scale degree function. Sensitivity to function leads to a heightened sense of afect and meaning, which in turn informs and enriches expressive performance.

Instructor's Note

One of the dangers of relying mainly on an absolute system (fxed-do or letter names) is to assume the students are thinking of the notes they are naming as functioning scale degrees. Just because students are able to retrieve and name pitches does not necessarily mean they are audiating them as dynamic functions. In fact, recent research suggests

that students with absolute pitch often tend to focus primarily on pitch naming rather than pitch relationships. For this reason, students with absolute pitch often need the most coaxing to think and, more important, feel the dynamic function of scale degrees they perform.[31] (See C-to-C Scales in Section 6 for a particularly efective exercise for training students with pitch to hear function.)

Exercise 4.3.1: Signaling Melodic Scale Degrees

Purpose: Identifying scale degrees in a melodic context.

Directions: Tis is a good introductory ear training exercise for identifying scale degree function in a melodic context. Te instructor plays a melody on the keyboard—composed, improvised, or from the literature. As students listen to the melody, they are to signal with a predetermined correlating gesture when a specifc scale degree has been played. For instance, every time students hear tonic, they are to chap their hands. Once adept at identifying tonic, students identify more scale degrees with other gestures. For instance, when they hear scale degree 5, they snap their fngers, and so on.[32]

Exercise 4.3.2: Function Infusers

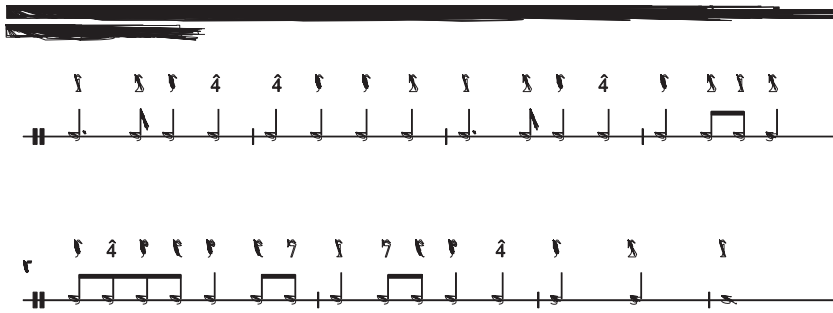
Purpose: Infusing relative function onto absolute labels and vice versa.

Directions: To begin, the instructor calls out a short series of scale degree numbers for students to sing back on fxed-do solfège or letter

names. Reverse the process; call out fxed-do solfège syllables or letter names in a designated key for students to sing back on scale degrees. Or write out requested scale degrees for students to convert and sing on fxed-do solfège or letter names and vice versa.

Coded Melody to Decipher: Te coded melody in Example 4.3.1 is one of many Dalcroze composed for developing functional solmization. Given are the melody's rhythm and scale degrees. Sing the melody in rhythm by translating scale degrees written above. Coded melodies such as this one can be sung in any key.[33]

Example 4.3.1 A sample coded melody.



Modifed version from Jaques-Dalcroze, *Les gammes*, p. 24.

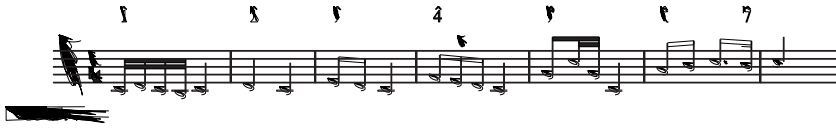
VARIATION A: Sing the coded melody's scale degrees on fxed-do solfège—an excellent activity for infusing absolute syllables with dynamic function. Invent your own coded melodies to sing in any major or minor key.

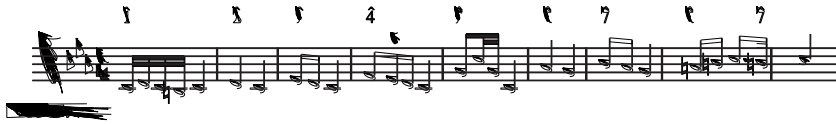
Exercise 4.3.3: Name That Scale Degree

Purpose: Developing relative pitch and tonic retention; developing acute sensitivity to function; knowing one's position at all times in the tonal hierarchy.

Preliminaries: First, students learn by rote and memorize the following resolution pattern for the major mode (see Example 4.3.2a). Students are to sing this pattern before playing the game, especially in the initial stages. Melodic fgurations measure the relative distance from each scale degree to tonic. (Once students are adept at fnding and singing scale degrees in the major mode, which may take several weeks, introduce the minor resolution pattern shown in Example 4.3.2b.)[34]

Example 4.3.2a. Resolution pattern for the major mode.



Example 4.3.2b. Resolution pattern for the minor mode.

Directions: To begin, ask students to sing the entire resolution pattern to establish the key. After they have sung the pattern, play random individual pitches on the keyboard within the C4–C5 octave for students to identify. Students sing back each scale degree and its respective resolution pattern to tonic—on scale degrees, solfège, or letter names. For instance, if the instructor plays scale degree 5, students sing back "5–1–5–1." If students lose tonic throughout the identification process, ask them to sing the resolution pattern again to re-establish the key. They soon realize that to successfully find and sing requested scale degrees, tonic needs to stay retained in memory. As students develop retention skills, continue increasing the number of pitches and the speed at which you play; the object is for students to retain tonic and sing any scale degree instantly within the tonal hierarchy. We highly recommend students gesture scale degrees with their hand while singing to reinforce the quality of each scale degree and its relative distance to tonic. Elicit metaphors from students to describe the unique characteristics of scale degrees they hear and sing, which helps reinforce not only their relative distance but also the qualitative feel (refer back to the Summary of Functions appended to Exercise 4.1.7).

VARIATION A: “Single sing-backs”—Once students are adept at fnding and singing individual tones with their resolution pattern, ask them to sing back individual tones without their patterns, to instill each tone’s position in the hierarchy without reference to tonic. Call out scale degrees for students to sing by number, solfège, or letter name.

VARIATION B: “Outliers”—As students become adept at identifying scale degrees within the C4–C5 octave, branch out into registers outside their vocal range and primary instrument to develop functional hearing in any register. Students are usually delighted by their newfound ability to recognize the function of any scale degree in any octave.

VARIATION C: Play a key-defning progression, such as I–IV–I–V7–I, to establish a key before playing or calling out scale degrees (which trains students not to rely on the pattern).

VARIATION D: Notating scale degrees—Students write down scale degrees they hear with numbers, or notate them on the staf with whole notes, to establish a link between functional hearing and notation.

VARIATION E: Multiple scale degrees—Play a series of two or more tones, and ask students to sing back the series of tones on scale degrees, solfège, or letter names. Increase the amount of tones you play to develop long-term functional hearing and tonic retention skills.

VARIATION F: Chromatics—Once students are adept at identifying and singing diatonic pitches, introduce all twelve pitches as a precursor to chromaticism and modulation. Students can name pitches as sharped or fatted.

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4. SCALAR FRAGMENTS—THE SCALE’S INNER WORKINGS

Introduction (to the Instructor and Students)

Fragments are stepwise segments of the scale ranging from two to seven notes in size. Scalar fragments acquaint you with the scale’s anatomy and train you to sing, recognize, and improvise melodic segments starting from any position in the scale. Scalar fragments also serve as useful building blocks for learning contextualized intervals (see Section 5), modulatory pivots (see Section 7), triads and seventh chords (see Chapter 5), improvisation, and melodic analysis.

We present a variety of singing, ear training, and improvisatory exercises, and again, most exercises are introduced in the major mode but should be practiced in all forms of minor, as well as modes.[35]

Dalcroze classifes scalar fragments as follows (his terms, of course, are not to be confused with their usage in set theory):

Dichords— two notes
Trichords— three notes
Tetrachords— four notes
Pentachords— fve notes
Hexachords— six notes
Heptachords— seven notes

In this section, we focus primarily on dichords (two adjacent notes) and trichords (three adjacent notes), as well as tetrachords (four adjacent notes) for learning scales, and pentachords (fve adjacent notes). We recommend beginning your study of scalar fragments with dichords.[36]

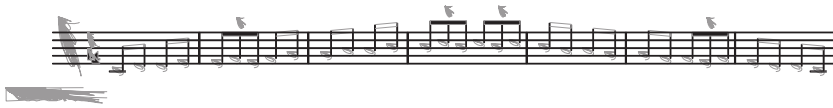
Exercise 4.4.1: Singing Dichords

Purpose: Discerning the "spatial" diference between whole and half steps and their position in the scale.

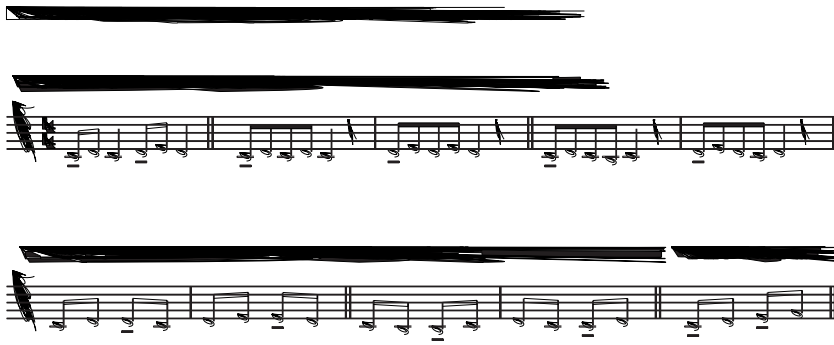
Directions: Sing the scale up and down in contiguous dichords (do-re, re-mi, etc.) in an eighth-note rhythm. Solfège can be substituted with scale degrees or letter names.

Dichord Hand Signals: As you sing dichords, physically identify half and whole steps with your hand—show half steps with your second and third fnger pressed together and whole steps with your second and third fnger pulled apart, which helps you remember (through kinesthetic and visual memory) their diference in size and position in the scale.

VARIATION A: "Rhythmically highlighting half steps"—Highlight half steps with a triplet fgure (mi-fa-mi). Tis is an excellent exercise for diferentiating whole- and half-step patterns in major/minor scales and other modes. Half steps could also be highlighted with sixteenth notes (see Example 4.4.1).

Example 4.4.1. Dichords with rhythmically highlighted half steps.

VARIATION B: Convert into a eurhythmic-solfège exercise—As you sing Example 4.4.1, physicalize an eighth-note rhythm by patsching your thighs on the downbeat and clapping your hands on the upbeat; this creates a three-against-two cross-rhythm between voice and hands at the triplet figure (this is a good exercise for teaching cross- rhythms).

VARIATION C: "Dichord patterns"—Sing dichords set to diferent melodic/rhythmic patterns to model their appearance in musical contexts. See Example 4.4.2.

Example 4.4.2. Dichord patterns to sing.

Compose your own melodic/rhythmic dichord patterns to sing. Cycle sing (Exercise 4.8.1) or leapfrog (Exercise 4.1.8) dichord patterns.

Ear Training—Scalar Fragment Sing-Backs

Sing-backs train you to aurally retrieve a scalar fragment from any position in the scale. In its simplest version, you identify and sing back the fragment you hear played at the keyboard or on another instrument.

Exercise 4.4.2: Dichord Sing- Backs

Purpose: Discerning between whole and half steps; aurally recognizing a dichord's relative position in the scale.

Directions: Te instructor plays a key-defning progression or asks students to sing the scale or resolution pattern to establish the key (refer back to Examples 4.3.2a and 4.3.2b). Play single melodic dichords (ascending and descending) and ask students to (1) identify if its a whole or half step with hand signals and/or (2) sing back the dichord on solfège, scale degrees, or letter names.

Instructor's Note

If students are having trouble identifying a dichord's position, ask them to sing the dichord on loo until they are able to identify its position with scale degrees, solfège, or letter names. Practice this exercise until students are able to recognize instantly the position of any dichord. Te object again is to acquire functional fuency.

VARIATION A: "Dichord chains"—In this exercise, students sing a series of out-of-context whole and half steps based on the direction and number of fngers the instructor holds up for students to sing. For example, one fnger pointing up or down signals a half step; two fngers pointing up or down signal a whole step. Te instructor presents a series of fnger signals (i.e., one or two fngers pointing either up or down), and students sing back the requested dichord to create a melodic chain of whole and half steps. For instance, if the instructor holds up one fnger, students sing an ascending half step, and then if the instructor points two fngers down, students sing a descending whole step, and so on. Tis game develops an acute awareness of whole and half steps by training students to instantly retrieve and sing them outside a tonal context in any order.[37]

Trichords

Trichords—three adjacent steps of the scale—are one of the most useful fragments for exploring the inner workings of the scale. Tey set the stage for triads and seventh chords, which we address in Chapter 5. Tey also serve as constructive building blocks for creating melodic improvisations (see Exercise 4.4.5) and as pivots for modulation (see Exercise 4.7.4).

Trichords are classifed into fve species:

Trichord Species 1: W W
Trichord Species 2: W H

Trichord Species 3: H W
Trichord Species 4: H A2
Trichord Species 5: A2 H

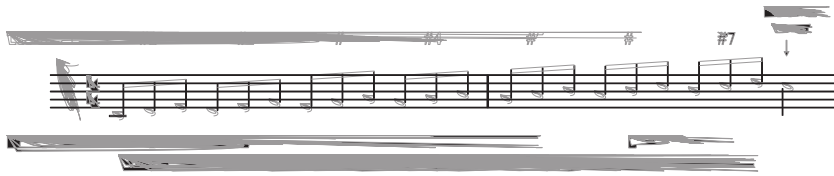
Te frst three trichord species make up the major, natural, and melodic minor scales; the last two trichords only appear in harmonic minor. We recommend singing trichords in the major mode before introducing minor modes.

Exercise 4.4.3: Singing Trichords

Purpose: Identifying trichords (ascending or descending) from any position in the scale.

Directions: Students sing a scale up and down in trichords (do-re-mi, re-mi-fa, etc.) in a triplet rhythm. Solfège can be substituted with scale degrees or letter names.[38] See Example 4.4.3.

Example 4.4.3. Te major scale in sequenced trichords.



Two Methods for Identifying Trichord Species

1. Hold up fngers: As students sing up the scale, Abramson suggests showing the trichord's species with your fngers (e.g., hold up one fnger for a species 1 trichord, two fngers for a species 2 trichord, etc.). Tis develops an acute awareness of their position in the scale.
2. Trichord hand signals: Use the frst three fngers of your hand to denote the three notes of the trichord. As with dichord hand signals, half steps

are represented with two fngers pressed together, whole steps with two fngers spread apart. Figure 4.4.1 shows hand signals for species 1, 2, and 3. (For species 4 and 5, show the augmented second with widened fngers.)

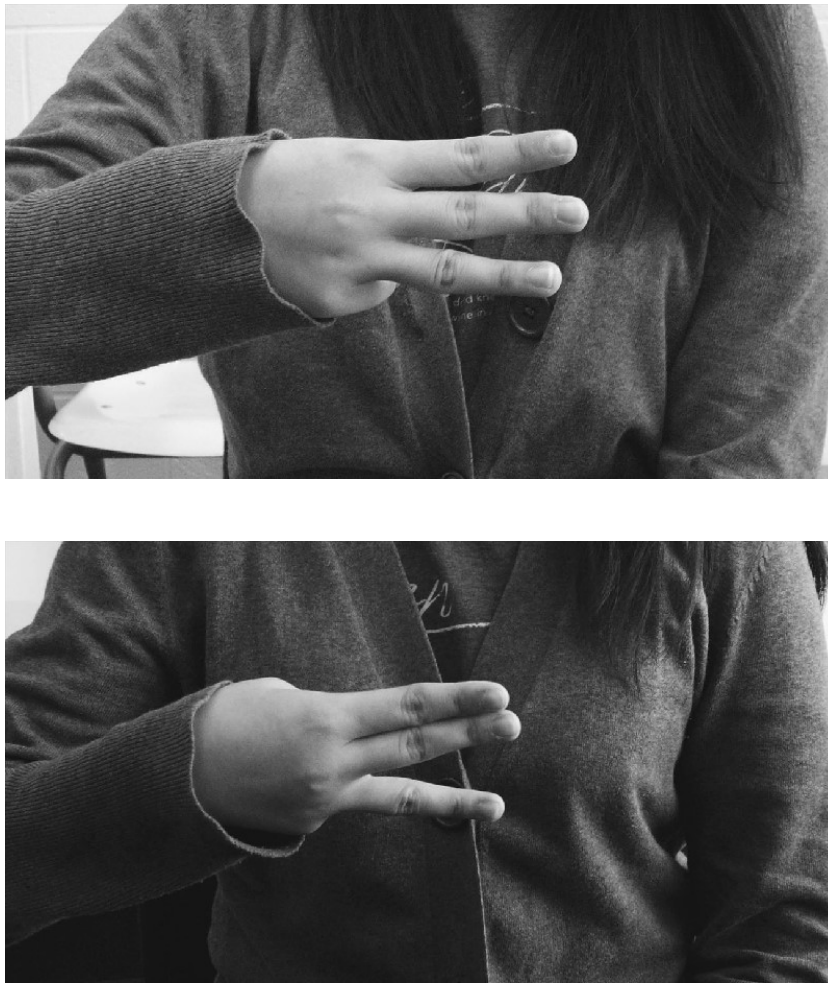


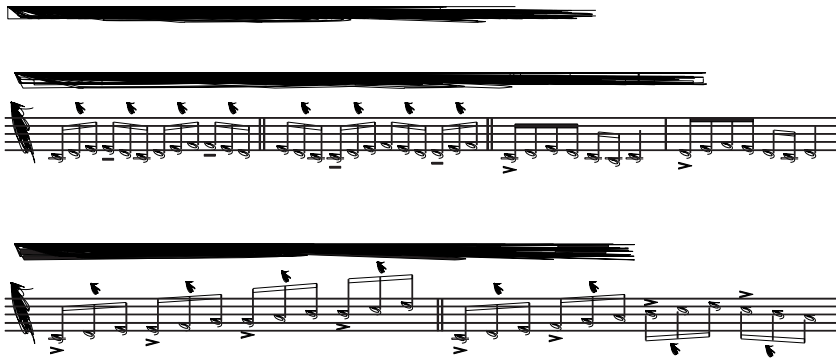
Figure 4.4.1. Trichord species 1 and 2.

VARIATION A: Descending trichords—Once students are fuent at singing and analyzing trichords in an ascending sequenced scale, analyze trichords in a descending sequenced scale. Tis is much more challenging, given that trichord species are analyzed from low to high. Te goal is to become fuent in identifying trichords both descending and ascending.

Figure 4.4.1 (Continued). Trichord species 3.

VARIATION B: "Trichord patterns"—Sing trichords in diferent melodic/rhythmic patterns to model their appearance in a musical context. See Example 4.4.4.

Example 4.4.4. Trichord patterns to sing.



From Abramson, Music as a Second Language, pp. 159– 62.

Compose your own melodic/rhythmic trichord patterns to sing. Cycle sing (Exercise 4.8.1) or leapfrog (Exercise 4.1.8) trichord patterns.

VARIATION C: "Scrambled trichords"—For a greater challenge, ask students to sing trichords out of order, for instance mi-do-re, fa-re-mi, and so on. Starting the trichord from any of its three pitches familiarizes students with its internal make-up and motivic possibilities.

VARIATION D: "Switch it up"—Sing every other trichord twice as fast or twice as slow, or change the dynamic level from forte to piano, or the

articulation from legato to staccato, or the mode from minor to major, and so on. Convert into a quick-reaction exercise by performing any of the aforementioned changes on the instructor's cue.

Exercise 4.4.4: Trichord Sing-Backs—In and Out of Context

Purpose: Identifying isolated trichords in and out of a tonal context.

We present two methods: (1) out-of-context sing-backs, which are useful for identifying a specific trichord species and for learning pitch-class sets in a post tonal context, and (2) in-context sing-backs, which sensitize you to a trichord's functional position in a tonal context.

Trichord Sing-Backs Out of Context

Directions: Te instructor plays random trichord species (ascending, descending, or out of order). Refer back to the fve trichord species. Students sing back the trichord on a neutral syllable and identify its species verbally and/or with hand signals.

VARIATION A: For a greater challenge, decide on a specifc trichord species (ascending or descending) students are to sing from a given note played on the keyboard. For instance, the instructor plays G, and students sing an ascending trichord species 1 (two whole steps) on a neutral syllable, and so on.

VARIATION B: Once students are adept at singing specifc trichord species from a given note, ask them to sing any of the fve trichords from a given note. Play a note, and use trichord hand signals with fngers pointing up or down to denote the trichord's species and direction for students to sing.

VARIATION C: "Coded trichords"—On the board, the instructor notates a scale on the staf and places the number "3" above each note with an arrow denoting the trichord's direction. Designate a specifc trichord

species for students to sing, such as trichord species 1 (whole-whole). Point to notes and have students sing on a neutral syllable an ascending or descending trichord species 1 from the given note. Tis exercise trains students to retrieve any species of trichord from any note.[39]

Trichord Sing-Backs In Context

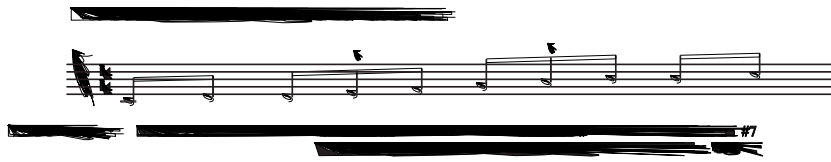
Directions: First, establish the key by playing a key-defning progression (e.g., I–IV–I–V7–I) or ask students to sing the scale or resolution pattern. Play random trichords for students to sing back (on a neutral syllable, scale degrees, solfège, or letter names), and ask them to identify the trichord's species verbally or with hand signals.

VARIATION A: "Trichord hunt"—For a greater challenge, the instructor plays a trichord on the keyboard, for instance, A–B–C. Students identify its makeup, in this case, a species 2 (whole-half); they then sing all the positions on scale degrees in which that trichord functions. For instance, A–B–C is 1–2–3 in A minor; 6–7–1 in C major; 2–3–4 in G major; and 4–5–6 in E minor. Tis is an excellent introductory exercise to modulation and for learning the trichordal relationships among keys.

Te next two variations combine trichords with dichords.[40]

VARIATION B: "Trichord-dichord scales"—Te instructor plays an ascending or descending scale made up of contiguous and continuous trichords and dichords; students sing back the scale on a neutral syllable, scale degree, or solfège and identify trichords and dichords with hand signals. Example 4.4.5 presents one of many possibilities.

Example 4.4.5. A trichord- dichord major scale.



VARIATION C: "Trichord-dichord melodies"—Te instructor plays short melodies made up of trichords and dichords using diferent rhythms in a designated key. You may need to dictate longer melodies in smaller sections. Students sing back and/or transcribe the melody and identify its fragments. Te general steps for identifying and transcribing are as follows:

Students are to:

Step 1: Sing back the melody on a neutral syllable (this step may need to be repeated several times).

Step 2: Sing back the melody with scale degree numbers or solfège to designate function.

Step 3: Identify the species of all trichords and dichords in the melody.

Step 4: Notate the melody.

Exercise 4.4.5: Improvising Scalar Fragment Melodies

Purpose: Encouraging musical spontaneity and creative expression.

Directions: As students become fuent in singing and identifying dichords and trichords, have them use fragments as building blocks to improvise and compose melodies on their instruments. We recommend starting with a limited amount of material; for instance, use only species 1 trichords and half steps. Example 4.4.6 illustrates a composed melody in the key of B♭ major using only trichord species 1 and dichord half steps.

Example 4.4.6. A melody composed of trichord species 1 and dichords.

Trichords and dichords provide useful markers to help orient you to your position in the scale when improvising, and they provide melodic frameworks from which to develop musical ideas. Fragments are rife with motivic possibilities. Consider creating melodies that employ various types of motivic transformations, such as inversion, sequence, and augmentation. See how varied you can make your improvisations and compositions based on a limited amount of materials.

Engaging Vocal-Muscular Coordination

Convert trichord sequence Example 4.4.3 into a eurhythmic-solfège activity by clapping, snapping, and/or stepping another rhythm as you

sing trichords. Physicalizing rhythms as you sing allows you to feel the dynamic interplay of two or more patterns in the vocal-muscular mechanism of your body. Dissociation exercises such as these train you to perform two opposing actions simultaneously, which strengthens multitasking capabilities—a vital skill for any musician.

Exercise 4.4.6: Eurhythmic-Solfège Trichord Sequence

Purpose: Experiencing the dynamic interaction between vocalized pitch and physicalized rhythms; coordinating two to three levels of beat between voice, hands, and feet; feeling the larger underlying pulse against the voice; multitasking.

Directions: Two-part rhythms—Sing the trichord sequence (Example 4.4.3) in triplets, and clap, snap, or step (in place or through space) any of the following accompanying rhythm against your voice—quarters, dactyls (quarter-eighth), anapests (eighth-quarter), or eighth notes—to create a two-against-three cross-rhythm.

Directions: Tree-part rhythms—Once you have mastered two parts, perform the trichord sequence as a three-part rhythm. For example, sing triplet trichords, clap eighth notes to create a cross-rhythm between voice and hands, and step quarter notes (in place or through space) to feel the underlying metric pulse. Alternate your feet in a right-left-right-left pattern, or establish a larger beat by alternating your feet in a right-left/left-right pattern, and so on—marking every two beats with the restrike. (Feel the enlivened anacrusic lift and the accrued weight of the restrike in your foot. Note the break in this two-beat pattern when reaching the sequence's cadential structural accent, as shown in Example 4.4.3.)

Diferent embodied rhythms emphasize diferent levels of pulse. Invent your own rhythms to perform between voice, hands, and feet.

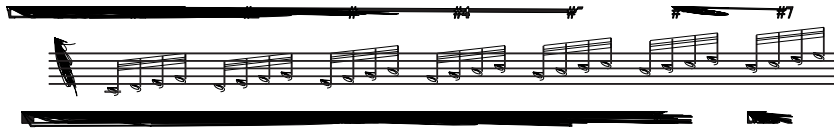
Tetrachords

Tetrachords—four adjacent steps of the scale—are useful for learning scales and for clarifying the diference between modes. Tey are also useful for discerning the function of larger scalar segments within a melodic context. Tetrachords are classifed into fve species:

1. Major (Ionian): W W H
2. Minor (Dorian): W H W
3. Minor (Phrygian/ Natural): H W W
4. Augmented (Lydian): W W W
5. Harmonic: H A2 H

Tetrachords make up the lower and upper halves of a wealth of scales, including major, natural, melodic, and harmonic minor, as well as other modes. For instance, the major scale is structured by a lower and upper major tetrachord (i.e., tetrachords #1 and #5), as shown in Example 4.4.7, which illustrates all the tetrachords that make up the major scale.

Example 4.4.7. Tetrachords of the major scale.



Tetrachord Hand Signals

Use the frst four fngers of your hand to denote the four notes of a tetrachord. As with dichord and trichord hand signals, half steps are represented with two fngers pressed together, whole steps with two fngers spread apart. Figure 4.4.2 shows hand signals for species 1 major and species 2 minor (for species 5, show the augmented second with widened fngers).

Figure 4.4.2. Species 1 and 2 Tetrachord hand signals.

Exercise 4.4.7: Singing and Identifying Tetrachords

Refer back to Exercise 4.4.3: Singing Trichords and ear training Exercise 4.4.4: Trichord Sing-Backs and apply modifed versions for learning tetrachords.

Exercise 4.4.8: Hand Signaling Scales

Purpose: Identifying the lower and upper tetrachord of scales; modal diferentiation.

Hand Signaling Scales: Represent the lower and upper tetrachords (#1 and #5) that make up any major/minor scale (or mode) with hand signals. Place both hands on top of one another with palms facing toward you—the bottom hand representing the scale's lower tetrachord, the top hand representing the upper tetrachord (make sure the index fnger of your lower hand and the pinky of your upper hand exact the distance of a whole step [i.e., between 4 and 5].) Figure 4.4.3 represents the stacking of two tetrachords that make up the natural minor scale: the minor + natural tetrachord.

Figure 4.4.3. Tetrachord hand signals for the natural minor scale.

Directions: The instructor calls out a scale, and students show the scale's two stacked tetrachords with hand signals. Select upper and lower tetrachords (ascending and descending) for students to sing with scale degrees, solfège, or letter names. This exercise develops students' ability to access and recognize both lower and upper halves of the scale.

Guided Analysis: Te function of tetrachords—Understanding the various functions of tetrachords develops sensitivity to their position in the scale and the dynamic roles they play in a melodic context (refer to Example 4.4.7). For instance, tetrachords #1 and #5 often take on cadential roles given that they both end on 1—tetrachord #1 brings closure by descending to tonic from above and tetrachord #5 brings closure by ascending to tonic from below. In contrast, tetrachord #4, framed by tendency tones 4 and 7, seeks resolution—ascending from 4 to 7 it points up to, and usually resolves to, 1; descending from 7 to 4 it points down to, and often resolves to, 3.[41]

Pentachords

Pentachords—fve adjacent tones—are classifed into fve species (for all modes except the harmonic minor scale). Te fve species of pentachords are:

1. Major (Ionian): W W H W
2. Minor (Dorian): W H W W
3. Minor (Phrygian): H W W W
4. Major (Lydian): W W W H
5. Diminished: H W W H

Example 4.4.8 illustrates the pentachords that make up the major scale. Pentachord species are particularly useful for discerning the qualitative diference between major- and minor-sounding perfect ffths and diminished ffths in major and minor scales.

Example 4.4.8. Pentachords of the major mode.

Modifed version from Abramson, Music as a Second Language, p. 228, and Stevenson, Pursuing a Jaques Dalcroze Education.

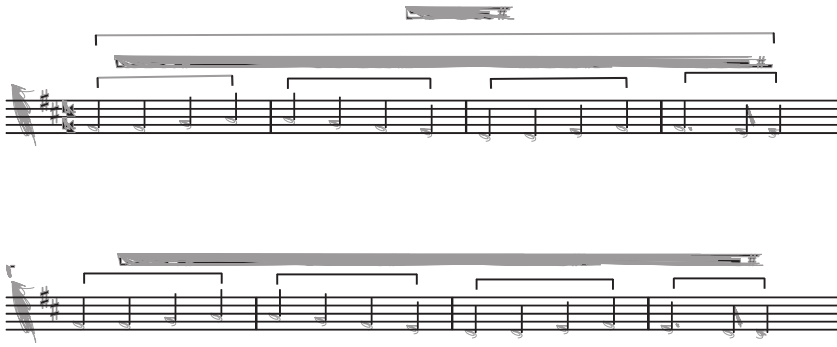
Exercise 4.4.9: Singing and Identifying Pentachords

Refer back to Exercise 4.4.3: Singing Trichords and Exercise 4.4.4: Trichord Sing-Backs and apply modifed versions for learning pentachords.

Guided Analysis: Te function of pentachords—In a melodic context, pentachords, like tetrachords, often take on functional roles based on their make-up. For instance, pentachords #1 and #4 often function cadentially given that they both end on tonic; pentachord #1 descends into tonic from above, whereas pentachord #4 rises up to tonic from below. In contrast, pentachord #7 (diminished), framed by tendency tones 7 and 4, often seeks resolution—when ascending from 7up to 4, it fnds resolution by stepping down to 3(often with a diminuendo); when ascending from 4down to 7, it often resolves by stepping up to tonic. Te internal make-up of pentachords and their connection to triads is explored in greater depth in Chapter 5: Harmony.[42]

Guided Analysis of Scalar Fragments: Dichords, trichords, tetrachords, pentachords—Look and listen for scalar fragments in the melodies you sight-sing, dictate, perform, and analyze. Scalar fragments serve as identifable markers for orienting your position in the scale and for understanding the functional and motivic construction of melodies. Begin by identifying the scalar fragments that structure familiar tunes, such as Beethoven's "Ode to Joy"; "Deck the Halls"; "Joy to the World"; "God Save the King"; and the opening theme of Mozart's K. 331. Example 4.4.9 demonstrates an analysis of scalar fragments that structure the opening parallel period of Beethoven's "Ode to Joy." (Please

Example 4.4.9. Analyzed scalar fragments in Beethoven, "Ode to Joy."



note that the analysis of a tetrachord in measures two and six could also include the following D to form a contiguous pentachord with the following trichord.)

5. INTERVALS—A CONTEXTUALIZED APPROACH

Introduction (to the Instructor and Students)

In the Dalcroze method, intervals are taught primarily as "skipped steps" derived from the scale—a third as one skipped step, a fourth as two skipped steps, and so on. In other words, the interval of a third is not simply conceived as a "measured space" outside the scale, but rather as a skipped step within the scale. We recommend both a scalar and nonscalar approach to teaching intervals; however, in keeping with the development of functional hearing, we believe students need to spend a substantial amount of time learning intervals within a tonal context.

Whether or not one agrees with a contextualized approach, we argue that it sensitizes you to the qualitative diference among same-named intervals in a way that an out-of-context approach does not. Take, for example, the four minor thirds of the major mode. Each has a unique function based on its scalar position. For instance, compare the minor third from 7 to 2 to that of 6 to 1. Te former sounds more active, even "wider" than the latter, which sounds more passive, and "smaller." A contextualized approach reveals these subtle diferences in quality to the ear. Ideally, we recommend combining a scale-based with a non-scale-based approach, given that each emphasizes diferent ways of audiating intervals.[43]

Exercise 4.5.1: Measuring Intervals from Tonic

Purpose: Measuring the intervallic distance of scale degrees from tonic in the major and minor modes.

Directions:

STEP 1: Students begin by singing each scale degree up from tonic with the following melodic/rhythmic patterns (i.e., scalar fragments)—on scale degrees, solfège, or letter names. Example 4.5.1 illustrates the patterns for each

scale degree in the major mode. Fragments serve as stepwise tethers that measure the intervallic distance of each scale degree from tonic. Conduct in duple meter or snap beats one and two while singing to maintain a steady pulse.[44]

Example 4.5.1. Melodic/rhythmic intervallic patterns from tonic.

STEP 2: Sing stepwise patterns to each scale degree followed by their respective interval (i.e., leave out intermediary tones). For instance, sing "1–2, ma- jor- se- cond"; "1–2–3, ma- jor- third"; and so on.

STEP 3: Finally, whisper or leave out the stepwise tether altogether and sing and name each interval from tonic. For instance, sing "1–2— ma- jor– se- cond"; "1– (2)–3—ma-jor third"; and so on, in the prescribed rhythm. Make sure to inner hear skipped tones as you sing.

STEP 4: Repeat steps 1 through 3 by singing the melodic/rhythmic patterns descending to each scale degree from the upper tonic, starting from 1 down to 7.

Once students are adept at singing intervals from tonic in the major mode, practice intervals from tonic in the minor modes.

Ear Training—Identifying Intervals To and From Tonic

Directions: On the board, the instructor notates all eight melodic intervals from tonic on the staf (without their tethers) and points to random intervals for students to sing and name from tonic (with or without tethers).

VARIATION A: Play random intervals from tonic, and ask students to identify the interval played by name and/or on scale degrees. Reverse the process, and play melodic intervals from scale degrees to tonic for students to identify.

VARIATION B: Convert into a eurhythmic-solfège exercise—Align students in a row, with each student representing the eight degrees of the scale. Students pass a ball to and from tonic as they sing each of their respective scale degrees in rhythm. Te ball passing provides a kinesthetic/visual representation that "measures the relative distance" of each scale degree from tonic.[45]

VARIATION C: "It's all in the cards"—Partners face one another; each student holds a deck of cards containing only twos through eights to represent all diatonic intervals. Red cards indicate ascending intervals from tonic; black cards indicate descending intervals from tonic. One student

holds up a card for the other to sing. For instance, if a student holds up a red three, his or her partner sings an ascending third from tonic. Students take turns holding up cards and singing requested melodic intervals.

Exercise 4.5.2: Drawing Intervals from Scalar Fragments

Purpose: Conceptualizing intervals as the outer tones of scalar fragments.

Directions: Extracting intervals from scalar fragments helps measure their size and relative position within the scale—trichords yield thirds, tetrachords yield fourths, pentachords yield ffths, and so on. We present singing and ear training exercises for drawing out thirds from trichords. Apply the following exercises to tetrachords for learning fourths, and pentachords for learning ffths.[46]

Warm- Up: Singing— Trichord/ Third Sequences

Directions:

STEP 1: Students sing the trichord sequence (refer back to Example 4.4.3), following each trichord with its respective third. For instance, sing "1–2–3–1–3/2–3–4–2–4," and so on. Or identify each interval by name, by singing "1–2–3– ma- jor third/2–3–4– mi- nor third," and so on.

STEP 2: Sing the trichord sequence in thirds: "1–3, ma-jor third/2–4, minor third," and son on, or "1–3/2–4," and so on.

Ear Training— Trichord/ Third Sing- Backs

Directions: First, the instructor establishes the key by playing a key-defning progression: I–IV–I–V7–I, then plays random ascending and descending trichords from the scale; students sing back only its outer tones—that is, the interval of a third. Sing back the third on a neutral

syllable and identify its quality as major or minor. Or identify its position by singing on scale degrees, solfège, or letter names.[47]

For each of the following variations, begin by establishing the key with a key-defning progression or the scale.

VARIATION A: “Fill in the blank”—Te instructor plays the interval of a third (ascending or descending) in the given key, and students sing back its respective trichord.

VARIATION B: “Te last word”—Te instructor plays the frst two notes of a trichord, and students complete the trichord by singing its third and fnal note.

VARIATION C: “Middle of the road”—Te instructor plays the frst and third tones of a third (ascending or descending), and students sing back its middle tone.

VARIATION D: “Sing in the blank”—Te instructor plays a starting note, and students sing the starting note and the interval a third above (the trichord’s last note). Also practice with descending thirds.

VARIATION E: “Te fnal destination”—Te instructor asks students to sing up a third from a given note that is called out. For instance, the instructor calls out “up from do,” and students sing the instructor’s note and a third above: “do-mi.” Or do the reverse: the instructor calls out “down from la,” and students sing “la-fa,” and so on.

Apply these exercises to tetrachords for learning fourths, and pentachords for learning ffths.

Also, refer back to Exercise 4.4.3: Name Tat Scale Degree and replace scale degrees with simple (and compound) ascending and descending melodic and harmonic intervals.

Exercise 4.5.3: Long-Range Intervallic Associations

Purpose: Hearing intervallic connections between nonadjacent melodic tones; building long-term memory associations.

Directions: Play a short phrase or melody—composed, improvised, or from the literature. Ask students to sing the frst and last note of the melody and identify the interval between the two notes. Increase the length and complexity of the melody, which requires students to retain the opening pitch for longer periods of time. Tis is an excellent exercise for comprehending the structural/expressive relationship between melodic points of departure and arrival.[48]

VARIATION A: Ask students to identify the interval of select nonadjacent intervals within a melody. Play a melody, accenting two of its nonadjacent notes. When the melody is fnished, students sing back the two accented notes (on a neutral syllable or scale degree) and identify the interval by singing, for instance, “per-fect ffth.” Replay the melody and choose intervals between other nonadjacent notes for students to identify. Choose structurally signifcant notes to accent, such as melodic high and low points.

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6. C-TO-C SCALES—A COMPARATIVE STUDY OF SCALES

Introduction (to the Instructor)

Dissatisfed with the pedagogical shortcomings he observed in the teaching of traditional scales to and from tonic, Dalcroze devised an approach profoundly more robust in practical application called C-to-C, or do-to-do, scales.[49] Tese scales are one of his most efective and innovative exercises for instilling sensitivity to scale degree function and functional transformation, and for comparing the relationship between all major and minor scales—an essential precursor for understanding modulation. Dalcroze viewed modulation as a change of scale and believed that if you could instantly swap scales, you could modulate to any key with ease. As he explains:

> Since each scale is formed by the same succession of whole- and half-steps, always in the same order, students will be able to recognize one scale from another only according to its reference to the tonic. Te relationship between one scale to another escapes them because the melody of the A fat major scale, for example, is the same as the melody of the C major scale, transposed a minor sixth higher or major third lower. But if you ask students to fnd the notes of the A♭ scale beginning on C (thus: C D♭ E♭ F G A♭ B♭ C), the students will recognize immediately that this melody difers from the one characterized by the C scale. Tey will realize that the whole- and half-steps are not in

> the same places and (as they know the established order of whole- and half-steps in a scale that moves from tonic to tonic), it will be easy for them to recognize, to discover the tonic of this scale, and to name the key by stating what place they occupy in the scale. In one or two months the students will manage quite easily to recognize all the keys in this manner. Te decision to use C as the initial tone permits all voices to sing all scales, as the changes carried by the order of steps and half steps sufces to give the impression of diverse scales.[50]

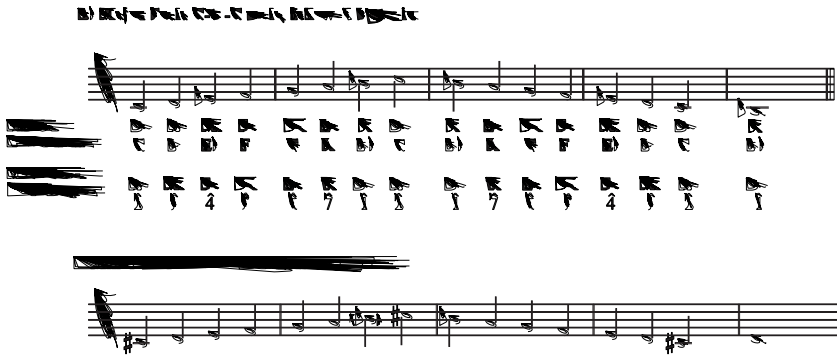
Dalcroze recommends introducing C-to-C scales once students have learned to sing a traditional major scale; however, we leave it to the instructor's discretion as to when they should be introduced and for how long.

It is important to stress that even though Dalcroze conceived of his C-to-C scales in a fixed-do system, they are adaptable to any system, including letter names, moveable-do, and numbers. We recommend using a combined system that models both pitch names and pitch relationships, such as fixed-do and numbers or letter names and moveable- do.

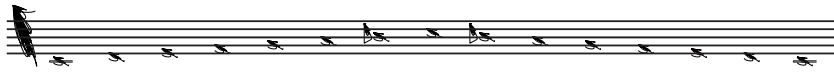
Getting Started (to the Instructor)

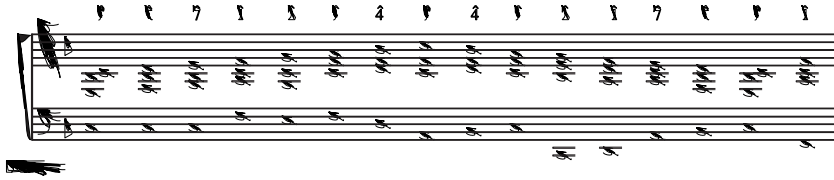
C-to-C scales position all twelve major/minor scales within the octave from C4 to C5 (or from C♭ to C♭, or C♯ to C♯ for keys containing C♭ or C♯). Te octave framework provides a fxed frame of reference from which to compare all major and minor scales in the tonal system. See examples of the B♭ major and D minor C-to-C scales in Example 4.6.1.

Example 4.6.1. B-fat and D minor C-to-C scales.



Unaccompanied, C-to-C scale look like modes; however, they are understood as major and minor scales beginning on scale degrees other than tonic. To appreciate this diference, sing the C Mixolydian scale shown in Example 4.6.2.

Example 4.6.2. Te C Mixolydian scale.

Now sing the same scale with the harmonization shown in Example 4.6.3 and end on F for closure.

Example 4.6.3. A harmonized F major C-to-C scale.

Te harmonization guides your ear into accepting the tones as an F major scale beginning and ending on scale degree 5. In fact, it is difcult to perceive of this harmonized version as anything but a diatonic tonality. As a mode, the ear assumes the initial pitch as the main tone, whereas the harmonized version compels you to seek clues that will lead you to tonic—F. C-to-C scales train you to become as familiar starting from any scale degree as you would from tonic, which models how most scales unfold in actual music.

Now, sing the scale again supported by a C dominant seventh chord. As you will soon discover, C-to-C scales are often harmonized with dominant chords, which impart enough tonal information to transform them into any major or minor key (Example 4.6.6 provides supporting dominant seventh chords for all C-to-C scales).

As a fnal step, sing an unaccompanied F major scale moving to and from the unstable scale degree 5. Feel E—now the leading tone—pull up to the stable
tonic platform, F. In other words, inner hear a harmonic accompaniment as you sing. Singing unaccompanied C-to-C scales trains you to hear the harmonic implications inferred by the tones and sensitizes you to their varying degrees of tension and release, which in turn enhances expressive artistry.[51]

Purpose

C-to-C scales develop the following tonal skills:

- Sensitivity to scale degree function and functional transformation (modulation)
- Acute awareness of half- and whole-step patterns and accidentals in any key
- Te ability to interpret a change in function, collection, and tonic in real time
- Awareness of your position at all times in a tonal context
- Sensitivity to “close and distant” key relationships

Pedagogical Strategies for Teaching C-to-C Scales (to the Instructor)

We divide our presentation of C-to-C scales into three main categories, with the understanding that the instructor will select and adjust the level of difculty according to students’ needs and progress. We recommend interweaving a variety of singing, ear training, and improvising activities into a single lesson (see a sample lesson from Dalcroze at the end of this section for one of many possible strategies):

A. Singing C-to-C scales
B. Ear training with C-to-C scales
C. Sight-singing, improvising, and composing C-to-C melodies

A. Singing C-to-C Scales

Te best way to introduce C-to-C scales is for students to sing them. For the minor mode, use harmonic or melodic forms of the scale. Te goal is to become fuent at singing both accompanied and unaccompanied versions of all major and minor C-to-C scales. We demonstrate by introducing the G major C-to-C scale.[52]

Directions:

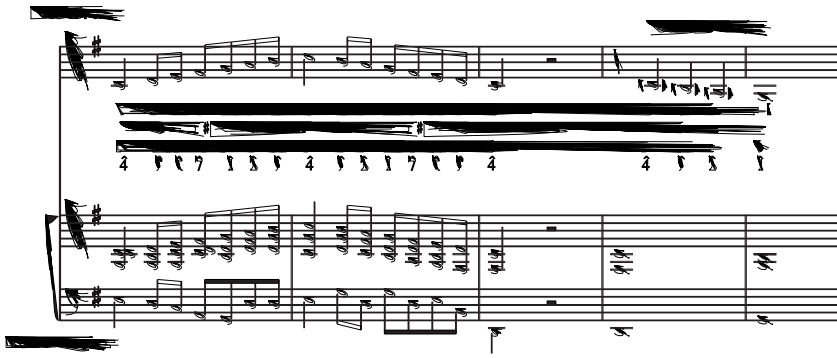
STEP 1: To begin, ask students to sing an ascending-descending C major scale in the rhythm shown in Example 4.6.4 (other rhythms can be used too) on fxed-do solfège or letter names without naming accidentals at frst (as will be explained).

Example 4.6.4. A rhythm for singing the C major scale.

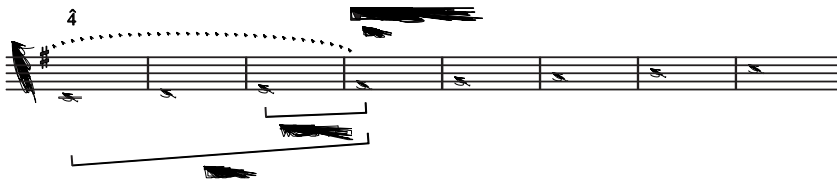
STEP 2: Ask students to sing the scale again, but accompany them with the harmonization shown in Example 4.6.5 (or use an accompaniment in any style of your choosing). Many students will automatically sing an F♯ (without naming it), whereas others need time to assimilate the new accidental. Students may need to sing the scale more than once to adjust to its new version, at which time the accidental can be named.[53]

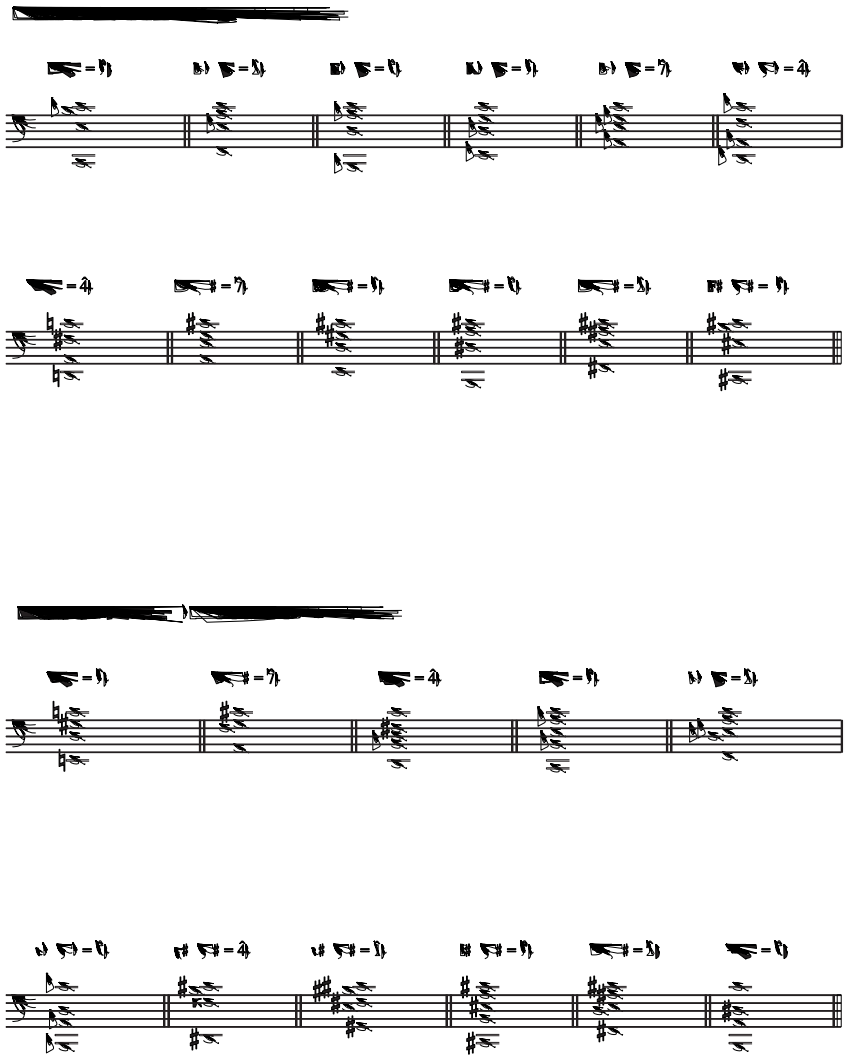
Once students have concluded the scale, ask them to sing by step (or directly) to what feels like the nearest tonic. Tose who sense that C is now functioning as scale degree 4 will automatically sing down a fourth or up (by step or directly) to G; others with underdeveloped relative pitch skills will need more time to fnd and process the new tonic. Harmonize their resolution to G with a V7–I cadence to confrm the tonality. Ask students to identify the function of C, which, in this case, is scale degree 4.

Example: 4.6.5. A harmonized G major C-to-C scale.



STEP 3: Write the G major C-to-C scale on the board and highlight its diferences to C major, that is, a shift in tonic from C to G; the accidental, F♯, now the leading tone; the emergence of a new whole-/half-step pattern leading to G; and the tritone between F♯ and C (see Example 4.6.5a).

Example 4.6.5a. An analyzed G major C-to-C scale.

STEP 4: Students sing the entire scale again on scale degrees or moveable-do to instill the scale's reassigned functions. Contour the scale with hand gestures as you sing (see Exercise 4.1.6 Hand Gesturing the Scale). Hand gestures are particularly useful for reinforcing reordered whole and half steps and change in function each C-to-C scale presents.

Example 4.6.6. Supporting dominant seventh chords for C-to-C scales.

Reproduced with permission from JMTP, Ristow, Tomsen, and Urista, 2014, p. 128.

VARIATION A: Dominant seventh-chord accompaniment—For a greater challenge, play a single D dominant seventh chord before students begin to sing, to prompt them into the key of G major. Sustain or repeat the chord to reinforce the tonality as they sing. After completing the scale, ask students to resolve by step or directly to tonic—G. Example 4.6.6 provides supporting dominant seventh chords for all major and minor C-to-C scales. For minor scales, use a V_{13} (the fat-13 elicits the minor mode), which can be sung in harmonic or melodic forms.

Instructor's Note

After singing the G major C-to-C scale for the frst time, students are usually curious as to why they spontaneously sang an F-sharp without even thinking! Tis teachable moment can lead to a compelling discussion about the dominant's dynamic role to direct us into a new key. Tis is one of the powerful advantages of adopting C-to-C scales as a pedagogical tool: students not only learn about the dominant, but also they experience its magnetic tendencies pulling them into each new key.[54]

VARIATION B: Unaccompanied C-to-C scales—As a fnal step, ask students to sing the G major C-to-C scale unaccompanied. Encourage them to inner hear a supporting dominant seventh chord and to express the dynamic make-up of the scale in their voice and hands, that is, the un stable Cs as scale degree 5s, the pull of F♯ to the now stable platform—G. In other words, imbue tones with the dynamic functions they occupy to help students understand and, more important, feel the shift in gravitational pushes and pulls each new key elicits.

Instructor's Note

After having been introduced to their frst C-to-C scale, students are usually eager to learn more. We recommend introducing the closely related keys of the major mode. Keep adding C-to-C scales to your repertoire. Major keys on the fat side of the circle-of-ffths (all of which begin on C with the exception of G♭ major) are easier to navigate at frst than keys on the sharp side (all of which begin on C♯ with the exception of G major). C-to-C scales can be introduced and reviewed in a variety of orderings over several months, even semesters.[55]

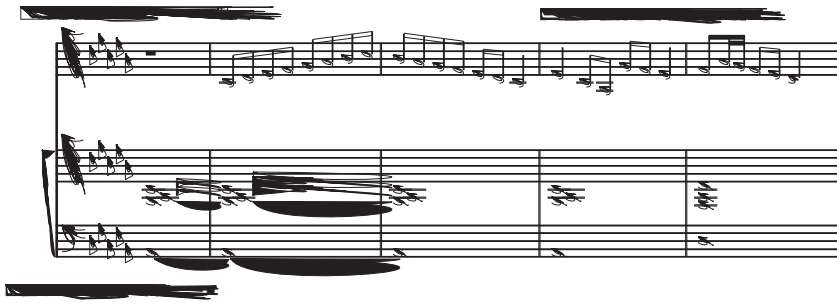
We recommend practicing both accompanied and unaccompanied versions of C-to-C scales, given that they each ofer diferent pedagogical benefts. Diatonic harmonizations provide the most straightforward guidance, whereas unaccompanied scales force the ear to navigate reordered whole- and half-step patterns unaided—an essential sight-singing and dictation skill.

VARIATION C: Once students have learned several C-to-C scales, a good strategy for checking their ability to sing unaccompanied scales is to simply play C and verbally call out the key of the scale they are to sing.

Point to Remember: Sing and gesture the dynamic qualities of scale degrees with expressive nuance—this is especially important for singing unaccompanied scales.

VARIATION D: Improvising dominant-tonic endings—Once students are adept at concluding several C-to-C scales to their tonics, ask them to embellish the scale's ending with an improvised dominant-to-tonic rif. Improvisatory rifs can range from the simple to more elaborate. See Example 4.6.7. Upon arriving on the fnal C, students may need to arpeggiate the tones of the dominant seventh chord frst, to identify which tones to use. Students discover through the improvisatory process which pitch patterns establish a convincing (vs. a not-so-convincing) tonal ending.

Example 4.6.7. An improvised V_7–I ending for a D-fat major C-to-C scale.



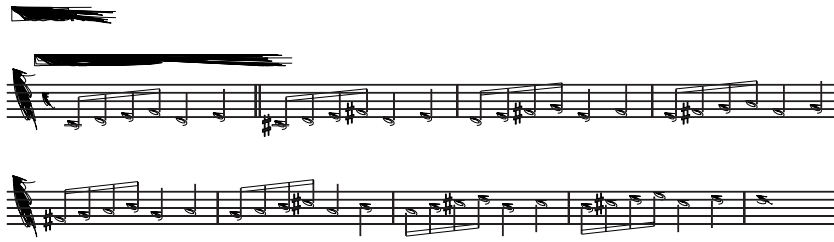
Reproduced with permission from JMTP, Ristow, Tomsen, and Urista, 2014, p. 137.

VARIATION E: Rhythms for singing C-to-C scales—We highly recommend rhythmically highlighting half steps to ingrain the reordered whole and half steps that arise with each scale. Refer back to Exercise 4.4.1: Singing Dichords, VARIATION A: Rhythmically highlighting half steps.

Exercise 4.6.1: Marches Mélodiques— "Melodic Walks"

Purpose: Navigating chromatic alterations, whole- and half-step patterns; motivic sequencing

Directions: Example 4.6.8 shows one of several marches mélodiques or "melodic walks" Dalcroze composed for singing C-to-C scales. (See, in particular, Volumes 1 and 2 of Les Gammes et Les Tonalités, Le Phrasé et Les Nuances.)

Example 4.6.8. A sample melodic walk (Marche mélodique) in D major.

Te rhythmic-melodic pattern is given, and it is taken for a walk up and/or down a C-to-C scale. Melodic walks teach students to navigate different whole- and half-step patterns and to discern the functional make-up of smaller fragments within the scale. Invent your own scalar pattern to "walk" up and down using fragments of various sizes.[56]

B. Ear Training with C- to- C Scales

Directions: As students become adept at singing C-to-C scales, start integrating ear training exercises. In the following exercise, students are to identify any or all of the following information from a given aural prompt:

1. Function of C
2. Tonic
3. Chromatic alterations

We ofer three prompts that model the types of aural cues one must interpret in a musical context. Prompts range in difculty based on the amount of tonal information they reveal to the listener.

Prompt 1: The Entire C-to-C Scale

Te entire scale serves as a good introductory prompt by providing all tones of the tonality. Begin by playing two C-to-C scales back to back, such as C and G, or G and F. As students become familiar with more scales, randomly play any scale from their repertoire and ask them to identify any or all of the aforementioned information, that is, the function of C, the tonic, or the chromatic alterations. If students are having difculty identifying information, ask them to sing back the scale.

Prompt 2: Whisk Scales and Clusters

For a greater challenge, play the entire scale up and/or down as a rapid glissando, or what many Dalcroze practitioners call a “whisked scale.” Or play all eight tones simultaneously as a cluster. Students are to identify the function of C and/or tonic. Whisked scales and clusters train students to discern tonalities as a whole (gestalt) and to interpret rapid shifts in collection that they would encounter in a musical context, such as a development section or late romantic work.[57]

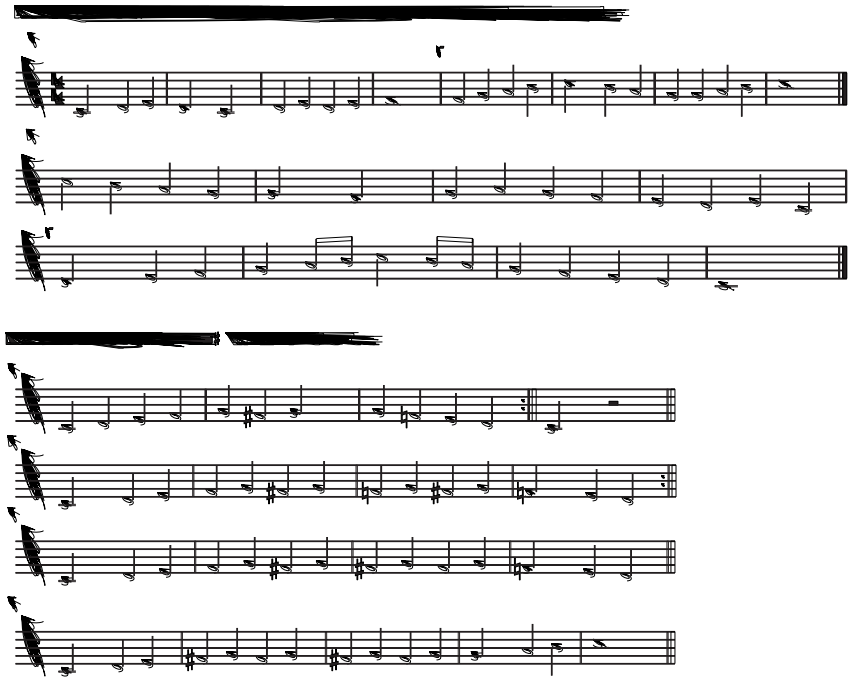
Prompt 3: Dominant Seventh + C

Directions: As students become adept at recognizing the entire scale, minimize the aural prompt to a single dominant seventh chord + C. Use chords provided in Examples 4.6.6 to prompt all major and minor keys. Tis prompt trains students to interpret an implied tonality, that is, a tonality expressed without its tonic.
STEP 1: Te instructor plays a single dominant seventh chord + C.
STEP 2: Students are to identify any of the following information. For instance, upon hearing a given F dominant seventh chord, students identify verbally or with their fngers (1) the function of C as scale degree 2 and/or (2) the tonic as B♭ (students could verbally name or sing from C directly or by step to tonic, in this case: 2–1. Tis exercise sensitizes students to the dominant’s ability to imply a tonality, as often experienced in highly unstable musical contexts. Increase the speed at which you play dominant chords until students can swiftly identify any implied key.

C. Sight-Singing, Improvising, and Composing C-to-C Scale Melodies

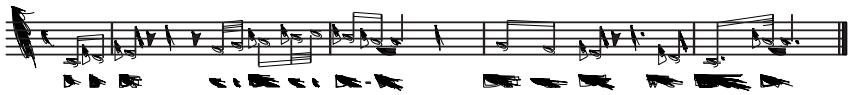
C-to-C Melodies to Sight- Sing

To help bridge the gap from abstract scales to actual music, Dalcroze recommends sight-singing C-to-C melodies, which he designed to adapt to any key. Example 4.6.9 shows two melodies from the scores he composed for his students.[58] When frst learning, say, the G major C-to-C scale, he suggests singing the same melody in both C and G major to compare their diferences. Drills are provided below the melodies for developing chromatic fuency. Compose your own C-to-C melodies to match the level and progress of your students.

Example 4.6.9. Two sample C-to-C melodies and drills.

From Jaques-Dalcroze, *Les gammes*, p. 25.

Improvising and Composing C-to-C Melodies

Improvising and composing C-to-C melodies develop improvisatory skills and provide a creative approach to learning scales. A well-thought-out composition hardly feels like a scale at all. For instance, Example 4.6.10 shows a melody based on the A♭ major C-to-C scale.[59]

Example 4.6.10. A composed A♭ major C-to-C melody.

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Final Instructor's Note: The Pedagogical Purpose of C-to-C Scales

Tere are many compelling reasons for incorporating C-to-C scales into the traditional undergraduate aural skills curriculum. From a surface practicality, all scales are set in a suitable vocal range for most singers—C4

to C5 for women and C3 to C4 for men. However, the pedagogical benefts run much deeper. First, they develop your ability to recognize a scale starting from any scale degree as they often appear in real music. Second, C-to-C scales teach functional transformation by training you to audiate C and the other tones as any scale degree. Knowing how to make any tone act as any scale degree is a critical skill for sight-singing and taking dictation. Tird, C-to-C scales train you to adjust to chromatic alterations and rearranged whole- and half-step patterns. Fourth, C-to-C scales level the playing feld between students with and without perfect pitch, by forcing students with pitch to interpret tones solely by function, which breaks them from the unmusical habit of simply naming tones.[60] Fifth, they lay the groundwork for modulation by allowing you to compare the relationship between all major and minor scales in the tonal system within a fxed framework. Finally, for some students, C-to-C scales instill the "absolute sound" of C. Although acquiring perfect pitch is certainly not the claimed goal of these scales, the sound of C often does become engrained into memory by its sheer usage as a pitch of reference. Many Dalcroze practitioners have purported that with extensive training, their adult students without absolute pitch are able to recall C unaided by the end of one semester.

A Sample Lesson from Dalcroze

Here are the steps Dalcroze suggests for introducing an unaccompanied G major C-to-C scale from *Les Gammes et Les Tonalités, Le Phrasé et Les Nuances* (Vol. 1, pp. 27–29), in which he intertwines a variety of singing, listening, and improvising activities into a single lesson. Tis is one of many diferent strategies to consider for teaching C-to-C scales.[61]

1. Te teacher sings a G C-to-C scale; students identify how it is diferent from C major. (Tere is an F♯.).
2. Te teacher sings or plays either the new scale or the C major scale, and students identify which scale it is.
3. Students sing tunes (written in the range from C to C) in C major and then in G major, beginning with simple patterns and moving to more complex tunes.
4. Te teacher sings or plays a tune either with or without F♯. Students identify which scale it was in.
5. Te teacher reveals: "Tis is the G major scale!" Students sing the scale followed by tonic.
6. Te scale is sung up and down in eighths, triplets, sixteenth notes, and sextuplets (continue until tonic is reached on a downbeat).

7. Rhythmic patterns: Te scale is sung up and down with diferent rhythmic patterns (quarter-eighth-eighth, for instance).
8. Listening exercises: One student is called on to sing a melody on the board and secretly told what scale to use. Once the other students know what scale the soloist is using, they join in singing.
9. Melodies: Students sing melodies written, mostly, in the range of C-to-C in all of the scales they know.

7. MODULATION— STRATEGIES FOR SINGING, HEARING, AND IMPROVISING

Introduction (to the Instructor and Students)

Modulation is one of the most challenging aural skills to master, and for good reason. Consider the amount and degree of change that is thrust onto the tonal feld when a modulation takes place. Tonic, the center of gravity, is uprooted to any number of possible new locations, chromatics enter the scene altering well-worn whole- and half-step patterns, and the tones undergo a functional reassignment, often in fux, until tonic settles into its new location. Negotiating all of these changes on the spot can at frst seem aurally disorienting and vocally cumbersome; however, with training, you can learn to navigate the multifaceted process of modulation with ease.

Te following exercises and games provide a much-needed skill-driven approach to modulation that complements the more abstract explanations taught in a theory class, explanations that often do not address how to sing and hear modulation.[62] Tese exercises model the processes of modulation (common-chord, abrupt, etc.), as well as feeting tonicizations. Whereas the analyst has the luxury to ponder over these processes out of time, the performer and listener must learn to interpret these processes in real time and, most important, react musically and intelligently to these changes. Te goal is to become fuent at sight-singing, hearing, and improvising a modulation to any key (for harmonic modulation exercises, see Chapter 5).

Modulation exercises develop the following skills:

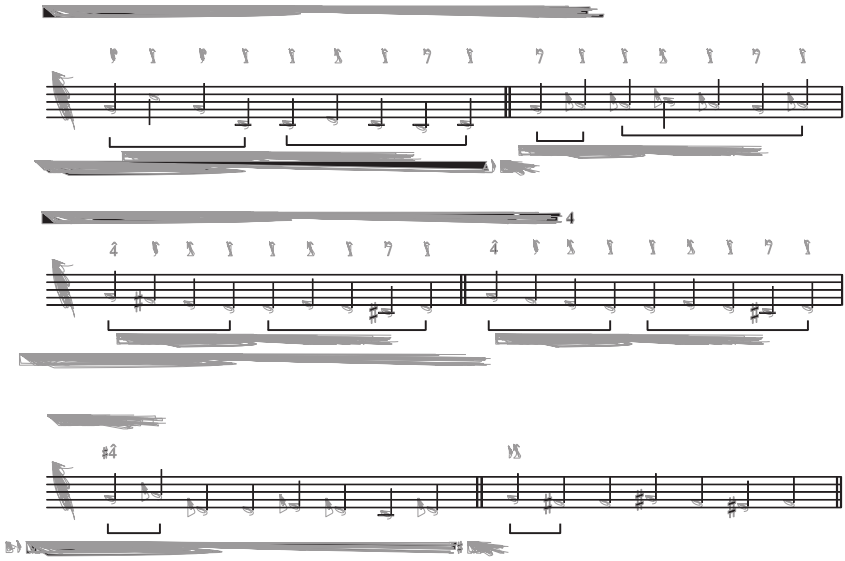
- Te ability to uproot and supplant a tonic to any location
- Te ability to navigate chromatic alterations and reordered whole- and half-step patterns
- Functional transformation— to make any tone act as any scale degree
- Pivotal fuency—to recognize potential pivots and possible new key areas
- Te ability to hear long-range melodic pitch associations
- Te ability to discern the “relative distance” among keys

Exercise 4.7.1: One- Note Wonder

Purpose: Developing functional transformation—common-tone pivots; creating a tonal context for oneself.

Directions: To begin, select a pitch that will serve as the "wondrous" pitch that can be transformed into any one of the seven possible scale degrees (1, 2, 3, 4, 5, 6, 7). To play the game, students take turns assigning scale degrees to the wondrous pitch, then singing the scale degree and its resolution pattern followed by a short melodic fgure to afrm tonic (refer back to Example 4.3.2a and 4.3.2b for resolution patterns). For instance, if the wondrous pitch is G, the frst student could sing it as 5 (the dominant of C major) and confrm its function with its resolution pattern followed by an improvised melody to confrm tonic. (See Student 1 in Example 4.7.1.) Students take turns pivoting into diferent keys from the wondrous note by assigning it diferent functions.[63]

Example 4.7.1. One- note wonder.



Reproduced with permission from JMTP, Rifkin and Urista, 2006, p. 67.

We recommend pivoting into major keys at frst. As you develop fuency, use the wondrous pitch to pivot into minor keys. For a more advanced version, interpret the wondrous pitch as a chromatic pivot (as shown in the last two examples of Example 4.7.1).

Exercise 4.7.2: Sing- Backs in New Places

Purpose: Singing and identifying abrupt (phrase) modulations; jumping immediately into a new key without a pivot; creating a tonal context for oneself.

Directions: Tis is a more advanced version of the sing-backs exercise presented in Section 4, in which students hear a short one- to two-measure melody (fve to eight notes) and sing it back in another predetermined key. To play, the instructor plays a short melody in a given key and then calls out another key for students to sing back the melody in—on solfège, letter names, or scale degrees. For instance, if the instructor plays a melody in G major and calls out "D major," students sing back the same melody in that key. Play the tonic of the new key you call out if students are having trouble fnding their frst note.

VARIATION A: "Vagrant tonalities"—Tis version models a musical context with rapidly changing tonal centers, or what Schoenberg refers to as vagrant tonalities, as in the case of development sections or late romantic works. To begin, the instructor plays a short melody in a given key and then calls out a series of random keys for students to sing back the melody in, for instance, D major, followed by C major, then F major, and so on. Tis exercise forces students to quickly (1) fnd new tonics in relation to previous ones, (2) discern the collection for each new key, and (3) establish a tonal context in real time. (Again, play the tonic of each new key you call out if students are having trouble fnding their frst note; the goal is for them to eventually fnd their note unassisted.)

VARIATION B: "Of the tonic"—For a greater challenge, play melodies for students to sing back in diferent keys that purposely obscure

the tonality by beginning on scale degrees other than tonic. Tis version trains students to sing back melodies in diferent keys starting on scale degrees other than tonic.

Exercise 4.7.3: Tonal Gateways—Paths to New Places (in Three Phases)

Purpose: Developing pivotal fuency and the processes of melodic modulation.

Directions: Te student chooses a key and improvises or composes a modulating melody in three phases.

PHASE 1: Improvise an opening phrase that establishes the opening key.

PHASE 2: Improvise a second phase that provides a "gateway" into the new key (e.g., include the leading tone of the new key and/or end on tones of the tonic chord of the key you wish to modulate—e.g., if moving to the dominant, end on tones of the V chord: 5, 7, or 2).

PHASE 3: Improvise a phase that ends with an authentic cadence in the new key to afrm the tonality.[64]

VARIATION A: "Midstream pivots"—Tis version models feeting tonicizations.

Improvise a melody on your instrument that ends on, say, scale degree 4, and put a fermata on it. Ten, alter the ending scale degree, say, to 6, and continue improvising a melody from the new scale degree in the new key. Or call out a new scale degree and ask another student to continue the melody from your new scale degree. Create a chain of tonicizations, either on your own instrument or with a partner.

VARIATION B: "Modulating fragments"—Te instructor plays a short melody—improvised or composed—that modulates into a new key. When fnished, ask students to (1) sing back both new and old tonics, (2) identify the interval between them, and (3) name the new key and its relationship to the original tonic. Tis exercise develops tonic retention and the ability to compare the relationship of new keys to the home key. We recommend modulating into a variety of diferent keys from the same key. Identifying

several modulating melodies departing from the same key creates a point of reference from which to compare the relative distance of many diferent keys.[65]

Scalar Fragments as Pivots

Once adept at singing and identifying trichords (see Section 4: Scalar Fragments), students are ready for a more advanced exercise that uses scalar fragments as pivots. As Karpinski points out, "Particularly notable is the fact that sight singers who read by tonal function generally make more frequent changes of tonic (and use more fragments of various scales) than one would fnd in any rigorous academic analysis."[66]

Scalar fragments provide a valuable pedagogical tool for modeling pivots and frequent shifts in tonic, as demonstrated in the following exercise.

Exercise 4.7.4: Proving Tunes

Purpose: Developing pivotal fuency and functional transformation; creating a tonal context for oneself; developing long-range tonal associations and long-term memory skills.

Directions for Improvising Proving Tunes: Proving tunes requires students to improvise melodies from a given trichord that ultimately must end in a key that proves the predetermined function of the initial trichord. From this activity, students learn how a single trichord serves as a "pivotal gateway" into diferent keys, which develops modulatory fuency. To begin, the instructor asks a student to play on his or her instrument or sing a given trichord that starts on any pitch. For instance, the student could sing a species 2 trichord on D–E–F (revisit trichord species in Section 4 of this chapter). Assign all possible scale-degree functions to that trichord, but don't give away their keys: for example: 2–3–4, 4–5–6, 6–1–7, and 1–2–3.

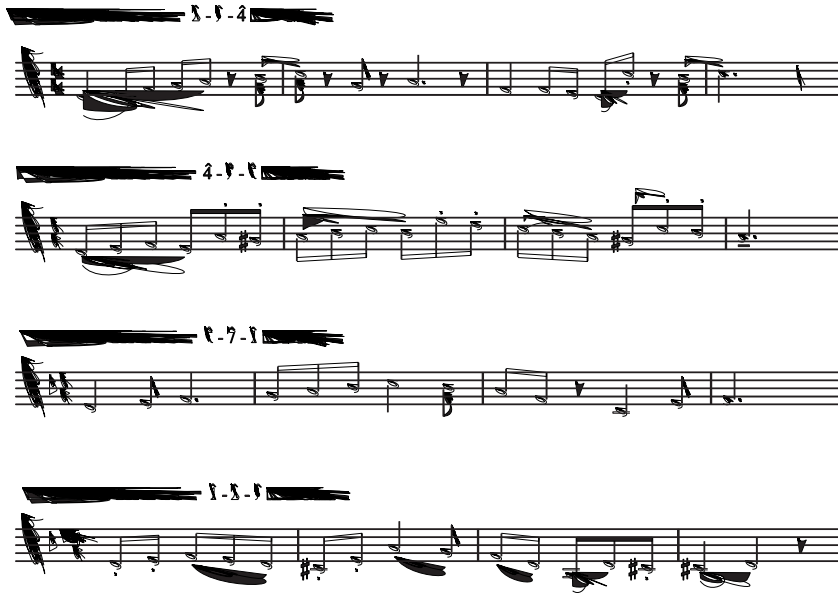
Ask the student to choose one of the possible functions and improvise a melody that ends on the "tonic" that will prove the assigned function. For instance, if D–E–F is to function as 4–5–6, the student needs to improvise

a melody that ends convincingly in the key of A minor. See possible melodies in Example 4.7.2.

Improvising proving tunes requires students to do the following:

- Identify the tonic that will transform the opening trichord into its assigned function, in this case, D–E–F as 4–5–6
- Insert the proper accidental(s) into the melody—in this case, a leading tone— G♯
- Create a melody with enough key-defning properties to successfully transform the opening trichord into its assigned function

Trough the act of improvisational trial and error, students learn the combination of required musical elements (rhythm/pitch patterns) to create a convincing key-defning melody, an activity that teaches them to establish a tonal context for themselves. Students also develop long-range pitch associations; upon reaching the fnal tonic, they have to have retained the sound of the opening pitches to know whether the opening trichord has been instilled with its prescribed function. After improvising a melody, the rest of the class could sing it back. Te instructor can harmonize the melody to reinforce harmonic hearing (dominant and tonic chords usually sufce).

Example 4.7.2. Possible proving tunes.

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Students take turns improvising proving tunes from the same D–E–F trichord with the remaining functions, respectively, 2–3–4, 6–7–1, and 1–2–3 (refer back to Example 4.7.2). Improvising proving tunes to all possible keys from a single trichord teaches pivotal fuency—the ability to interpret all pivots inherent in a given set of notes—an essential skill for becoming fuent at singing, hearing, and improvising a modulation into any key.

VARIATION A: Once students have mastered improvising melodies into diferent keys, they can take turns performing one continuous modulating melody that moves into several keys using the trichord as a pivotal gateway into each new key. Tis exercise is especially useful in teaching vagrant tonalities, that is, rapidly changing tonal contexts, as in the case of development sections or late romantic works.

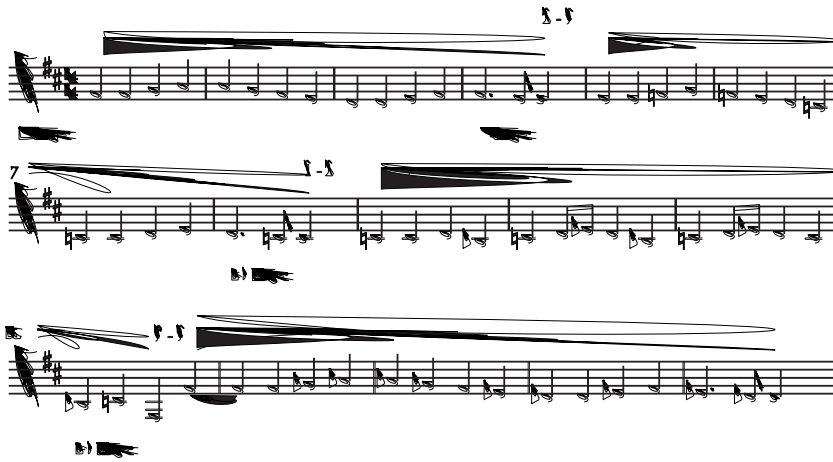
Directions for Ear Training with Proving Tunes: Proving tunes also serves as a useful ear training exercise. To begin, the instructor plays a given trichord in isolation (either ascending or out of order). Te instructor then improvises a series of melodies that end in diferent keys from that given trichord. After students have heard the melody, ask them to identify (1) the function of the opening trichord and (2) the key of the melody. Students can also sing or play back the melody on their instruments. Proving tunes trains students to seek out tonal cues as the melody unfolds to verify the assigned function of the opening trichord. Increase the speed at which you play each new melody; the goal is for students to recognize instantly the key and assigned function of any opening trichord. Or have students take turns improvising melodies starting from the same trichord that modulate to all possible keys for the class to identify. Tis activity engages the entire class in the improvisatory and ear training process. As a fnal step, students notate melodies.[67]

Exercise 4.7.5: Inserting Pivots—Taking Familiar Pieces to “New Places”

Purpose: Functional transformation; creating a tonal context for oneself; identifying rapidly shifting tonics.

Directions: Tis modulation game involves inserting modulatory pivots at the ends of phrases in a familiar melody. Students sing or perform the melodies on their instruments. Take, for example, Beethoven's "Ode to Joy" and start each new phrase on the last note of the previous phrase. Perform the entire song this way. When frst performing this exercise, show with your fngers at the end of each phrase the new scale degree that the fnal note will become before playing the next phrase. Once you are able to identify the new scale degree, hold the last note of each phrase with a fermata until you can inner hear the new scale degree before continuing on. Retain the intervallic content of each phrase you perform, which requires inserting the correct chromatic alterations. You must know the scale degree and key of each new phrase to perform it accurately. Te theme begins in D major and, if done properly, should end in D-fat major. Example 4.7.3 illustrates the recomposed version with inserted pivots.[68]

Example 4.7.3. Beethoven, "Ode to Joy," with inserted pivots.



VARIATION A: Take other familiar tunes to new places by starting each new phrase (or subphrase) on the last note of the previous phrase, for instance, "Frère Jacques," "Jingle Bells," "My Country tis of Tee," and so on.

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8. SIGHT-SINGING AND INNER HEARING STRATEGIES

Introduction (to the Instructor)

In this section, we present a variety of strategies to enhance sight-singing and inner hearing skills. Exercises are designed to highlight specifc

concepts, but as with many eurhythmics activities, several skills and behaviors are addressed simultaneously in a single exercise. Use techniques to instill the skills and concepts you wish to address, and adjust the level of difculty to ft the needs and abilities of the class. Pedagogical tips for sight-singing are appended to the end of this section.

Exercise 4.8.1: Cycle Singing

Cycle singing entails students taking turns singing a predetermined segment of a melody in succession, such as a phrase, subphrase, measure, or beat.[69]

Purpose: Staying alert; entering a melody midstream; maintaining a pulse; remaining unfazed by others' mistakes—an essential skill for ensemble playing.

Formation: Sit in rows or in a half circle.

Directions: First, determine the direction students will sing—clockwise or counterclockwise. Ten, determine the melodic segment everyone will sing. For instance, if singing measures, the frst person sings measure one, the second person sings measure two, and so on. Cycle through the entire melody several times to give each person the opportunity to sing diferent measures.

Cycle singing forces students to remain alert. Tey must maintain a steady pulse and listen to each person sing his or her part to enter with their own part on time (which helps in processing and memorizing). You must abide by two rules when cycle singing: (1) keep the beat—clap, snap, or conduct as you sing, and (2) enter precisely on time with the correct notes, no matter what happened beforehand—which is a challenge if someone loses the beat or gets of-pitch before you are about to sing. Cycle singing trains students to keep going no matter what happens, an essential skill for ensemble playing.

VARIATION A: Cycle sing phrases or subphrases. Tis works best with melodies that have clear-cut phrase structures. For melodies with irregular phrasing, determine ahead of time which phrases to sing. Deciding how to segment a melody often leads to interesting discussions about the diference between a phrase and subphrase.

VARIATION B: Cycle sing beats. Tis is a challenging version for maintaining the pulse, especially in highly subdivided melodies. You may need to slow down the tempo to cycle sing beats with precision.

Instructor's Note

As students become adept at cycle singing a melody, gradually increase the tempo to initiate faster response times. Cycle singing is also a useful pedagogical tool for highlighting specifc musical concepts, such as phrase types and modulations, as shown later.

VARIATION C: Te parallel period—Take turns cycle singing the antecedent and consequent of a parallel period. Respond musically to one another with an afective "answer" to the other's "question" to create an expressive dynamic whole.

VARIATION D: Te sentence—Take turns cycle singing the basic idea, the repeated (varied) basic idea, and continuation (see Chapter 6). Respond to each part to create a meaningful whole.

VARIATION E: Modulation—Take turns cycle singing the three phases of a modulating melody. First, determine the phases students are to sing: (1) the opening phase that establishes the home key, (2) the transitory phase that moves into the new key, and (3) the fnal phase that affrms the new key. Encourage students to respond to each other's parts to create an expressive modulatory melody.

Exercise 4.8.2: Target Singing

Purpose: Targeting specifc tones (such as the dominant or tonic) of a melody forces us to retrieve and produce tones without the aid of a surrounding context, which encourages functional audiation.

Formation: Sit in rows or in a half circle.

Directions: Select predetermined tones for students to sing aloud; they are to sing all other tones silently. For instance, singing only scale degree

5 highlights the dominant function and its various roles in a melodic setting—the dominant feels relatively stable when participating in a half cadence compared to its active role as the penultimate tone of an authentic cadence.

VARIATION A: Tere are numerous ways to target sing. For example, only sing aloud (1) tones of the tonic triad, 1–3–5, to highlight relatively structural stable tones; (2) tones of the dominant seventh chord; or (3) chromatic pitches.

Instructor's Note

Target singing is a useful strategy to perform at the end of class for reinforcing a newly introduced concept. After students have learned a new melodic/harmonic concept, such as the raised 4 of an augmented sixth chord, target sing all diatonic and raised 4s in a melody. Students leave class with the new concept highlighted in aural memory.

Exercise 4.8.3: Replacements

Purpose: Replacement is a powerful pedagogical tool for fostering good sight-reading skills, adapting to unexpected change, and promoting musicality.[70]

Directions: A replacement is an alteration that has been preassigned to the melody you are to sing—such as rests on a predetermined beat or a tempo change. Altering specifc elements in a melody reinvents the same melody in a variety of ways, enabling students to engrain melodic and rhythmic patterns without "checking out" from boredom—an inherent danger with repetitive drills. Replacements also ofer insight into the craft of compositional variation.

Choose any of the following replacements based on the musical concepts and skills you want to address. Repeat each replacement until

students can perform them with ease. Adjust tempos accordingly; increase the tempo for a greater challenge.

Rest Replacements

Purpose: Developing inner hearing; maintaining a steady pulse through silence; starting and stopping on cue; entering midstream on any scale degree.

Formation: Sit in rows or in a half circle/

Directions: Replace every other measure with silence. In other words, sing the frst measure aloud, rest on the second, sing on the third, and so on. Subvocalize rested measures to ensure an accurate re-entry. Students should tap or conduct through rests to maintain the beat.

VARIATION A: Select specifc beats to rest on. For instance, sing all notes except for the downbeat of each measure. Select various combinations of beats to rest on, for instance, beats two and four, and so on.

VARIATION B: Scale degrees—Students rest on specifc scale degrees, for instance, rest on all tonic and/or on all dominants, and so on. Silently singing specifc scale degrees strengthens functional audiation.

VARIATION C: Quick- reaction exercise— Unmeasured silence— On the instructor's cue "stop," students stop singing aloud and continue singing silently. On the instructors cue "start," they resume singing aloud. Students must maintain the beat and subvocalize to sing aloud again with accuracy. Stretch the silence over multiple measures to develop long-term rhythmic and tonal memory skills.

Point to Remember: For all rest replacements, inner hear the melody through the silence.

Tempo Replacements

Purpose: Calculating and executing tempo changes on the spot.

Directions: Insert tempo changes at predetermined points in the melody. A common example requires singing every other measure twice as fast or slow, forcing students to diminute or augment the rhythm every other measure. Tempo replacements are challenging at frst, so start with melodies that employ simple rhythms.

Modal Replacements

Purpose: Developing modal fuency.

Directions: Quick-reaction exercise—Students alter the mode of the melody they are singing on cue. For instance, if singing a major melody, begin singing in minor on the instructor's cue (vocal or musical) and vice versa.

Expressive Replacements

Purpose: Maintaining a steady tempo during sudden dynamic changes; articulatory refnement.

Directions: Inserting predetermined expressive marks in a melody trains students to employ sudden changes in dynamics and articulation (changes in energy and weight) while maintaining a steady tempo. For instance, sing every other measure forte or piano, or sing every other measure legato or staccato, and so on. Inserting diferent expressive markings illustrates their ability to alter a melody's character and encourages musical fexibility. Strive for expressive precision as a group.

Instructor's Note

Insist that students keep a steady pulse when employing dynamic changes. Te tendency, of course, is to rush ahead when getting louder and lag behind when getting softer. Tis exercise trains students to keep a steady pulse while making sudden changes in dynamic energy. Encourage students to conduct as they sing until they have complete control over the tempo no matter how loud or soft they sing.

Exercise 4.8.4: Scalar Tethers—Measuring Melodic Leaps

Purpose: Singing melodic intervals with accuracy; measuring their "distance."

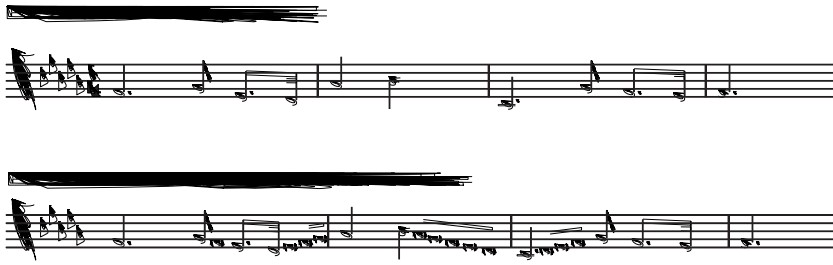
Directions: Melodic leaps, especially larger ones, can be challenging at frst to land on with accuracy when sight-singing. Filling in melodic leaps with stepwise motion, that is, scalar tethers, helps students gauge the "size" of the intervals they sing by revealing the "ghost tones" (while not heard) that span within the interval. As Abramson cautions:

> Many students think of intervals as … leaps … through musical space from one note to another with no understanding of the scale tones BETWEEN the outer notes. Tis leap is made through a kind of "Black Hole" in musical space, where distances, measurements, gravitational pulls and pushes, and all

manner of physical laws are suspended for the duration of the leap. In this regard, intervals can sometime be referred to as “leaps of faith.”[71]

Scalar tethers are particularly useful for gauging the distance of larger intervals, helping students to sing them with accuracy and expressive nuance.

STEP 1: Fill in all melodic leaps you sing with stepwise motion, that is, scalar tethers, while preserving the rhythmic pulse as best you can. You may need to slow down the tempo at frst. Te wider the interval is, the more steps within and, therefore, the faster the subdivisions are. You may need to sing rapid subdivisions as a glissando. Te opening measures of Bach’s Clavier Suite in G major (transposed to the key of D-fat) features several wide leaps that are challenging to sing. Te second version illustrates the use of scalar tethers (see Example 4.8.1).

Example 4.8.1. Scalar tethers in Bach, Clavier Suite in G major.

STEP 2: Once you become adept at singing intervals with their tethers aloud, whisper or sing them pianissimo.

STEP 3: Remove the tethers altogether, but inner hear scalar tethers between the intervals you sing.

STEP 4: Sing the melody and let go of the tethers completely.[72]

Pedagogical Tips for Sight-Singing (to the Instructor)

Never Give Away Tonic

When sight-singing, never give away tonic. Always encourage students to fnd a melody’s tonic on their own using the following methods: (1) use the methods in Section 1: Example 4.2.1: Invitations to Tonic, or (2) for a greater challenge, ask students to fnd tonic based on the tonic of the previous melody sung and to identify the interval between them. Tese

techniques teach tonal independence and the ability to adapt instantly to a new key.

Use Scalar Fragments as Melodic Markers

Analyze the scalar fragments structuring the melodies you sing. Fragments provide useful markers to help orient the students' position in the key and for illuminating the melody's functional and motivic make-up.

Look Ahead

A good sight-reader needs to prepare for what is to come by reading ahead. Ask students to place an index card over the remainder of the measure(s) they are about to sing, which forces them to look ahead and memorize what they are about to sight-read.

Sing with Expression

Apply Dalcroze's rules of nuance, accentuation, and phrasing to the melodies you sing (found in Appendix B). View his rules as suggestions for drawing out dynamic nuances "living within" the melody. Write out expressive markings in your score as reminders, but ultimately learn to interpret these "rules" without the aid of written markings. As Graybill reminds us, "Te musical impulse must arise from within the student and not from the diacritical marks themselves."[73]

Point to Remember: Look ahead to pace applied rules of nuance, accentuation, and phrasing to the melodies you sing.

CHAPTER 5

Harmony

OVERVIEW (TO THE INSTRUCTOR AND STUDENTS)

In his ear training manuals, Dalcroze focuses primarily on the scalar origin of chords and harmony, with little emphasis on developing harmonic training from a vertical perspective. As mentioned in Chapter 4, Dalcroze references all tonal elements to the scale, including chords, which he conceives as superimposed scale degrees. We begin by introducing diatonic triads, seventh chords, and their inversions as derivations of scalar fragments to highlight their scalar make-up and to promote contextual understanding (see Chapter 4, Section 4: Scalar Fragments).

In keeping with Dalcroze's emphasis on functional hearing, vertical harmonies are introduced and classifed according to three main functions—tonic, predominant, and dominant—to develop sensitivity to the dynamic relationship between harmonies and the roles they play in the tonal syntax. Tese three classifcations allow you to compare chords that difer in quality but share the same function. Take, for example, the two progressions I–IV–V and I–ii6–V. Although IV and ii6 have diferent qualities, they each share the same predominant function; that is, they both lead to the dominant. C-to-C scales (introduced in Chapter 4) are also revisited to demonstrate the processes of modulation from a harmonic perspective and to compare the afective diference between "close" and "distant" related keys. Finally, stepping/singing exercises are introduced to embody the dynamic relationship between the underlying harmonies and melodic surface in tonal works on both small and large scales. Harmonies are notated beneath the score, enabling you to form comparisons between harmonic reductions and the music.

Chapter 5 Exercises

1. Chords—Harmonic Building Blocks Derived from the Scale
2. Inversions—Triads and Seventh Chords
3. Embodying Harmonic Function
4. Modulation
5. Embodying/Integrating Harmonic Progressions in Music

1. CHORDS—HARMONIC BUILDING BLOCKS FROM THE SCALE

In this section, we introduce triads and seventh chords as derivatives of scalar fragments (as introduced in Chapter 4) to elucidate their scalar origins, intervallic make-up, and function in a tonal context. Our presentation is organized into two sections:

Triads—two contiguous trichords = pentachord
Seventh chords—three contiguous trichords = heptachord

Diatonic Triads—Two Contiguous Trichords = Pentachord

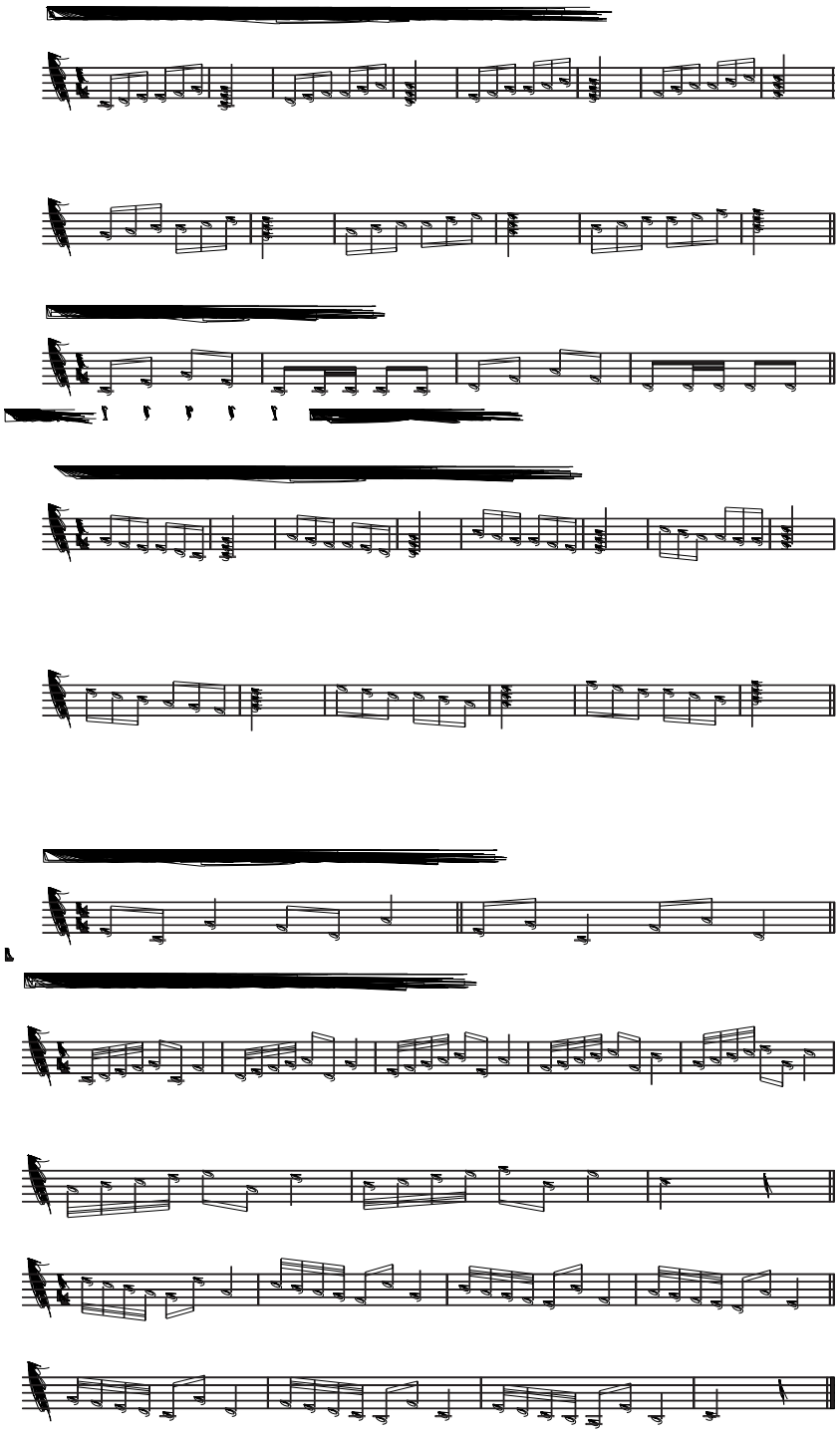
We begin with diatonic triads—the conjoining of two contiguous trichords framed by a pentachord (revisit trichords and pentachords in Chapter 4, Section 4: Scalar Fragments if necessary).

Exercise 5.1.1: Singing Diatonic Triads of the Major Mode

Purpose: Learning the scalar origin, intervallic make-up, and function of all diatonic triads of the major and minor modes.

Directions: Students sing the sequences (on scale degrees, solfège, and/or letter names) shown in Example 5.1.1.

Sequence A: Highlights the trichordal origins of diatonic triads of the major scale, that is, two contiguous trichords followed by the derived triad. Students are to sing the trichords followed by an arpeggiated triad to and from its root. (Optional: As students sing, they can show trichord species with hand signals; see Chapter 4, Section 4: Scalar Fragments for

Example 5.1.1. Diatonic trichord-triad sequences in the major mode.

trichord hand signals.) Trichords reveal the following melodic/harmonic information about diatonic triads: (1) their scalar origins, (2) the quality of thirds, and (3) the ghost tones between thirds.

Once students are adept at singing Sequence A, ask them to sing Sequence B.

Sequence B outlines the triads independent of their trichordal origins.

Sequence C trains students to recognize and sing triads starting from their ffth member (as they often unfold in music).

Sequence D features two versions that train students to sing triads starting from their third member.

Sequence E highlights the pentachords framing each triad and serves as a good warm-up for recognizing and singing ffths.[1]

VARIATION A: Sing select triads from Sequence A and B to form idiomatic chord progressions, such as I–IV–V or I–vi–IV–V.

VARIATION B: Invent your own scalar-triadic sequences to sing in different rhythms.

Exercise 5.1.2: Triad Sing-Backs—In and Out of Context

Purpose: Singing and aurally recognizing any quality of triad in and out of a tonal context.

We present two methods for triad sing-backs: (1) out-of-context sing-backs, which are useful for learning to sing a triad of any quality outside a tonal context, and (2) in-context sing-backs, which sensitize students to a triad's function and position in a tonal context.

Triad Sing-Backs Out of Context

Te object of the following exercise is for students to instantly fnd and sing any quality of triad (major, minor, diminished, or augmented) starting from any of its members (root, third, or ffth).

Directions: “One more makes a triad”—Te instructor plays a random major third (an ascending melodic or harmonic) on the keyboard; students sing a minor third above (i.e., its ffth member) to form a major triad. Te instructor plays a minor third; students sing a major third above (i.e., its ffth member) to form a minor triad. Once students can form major and minor triads with ease, have them create augmented and diminished triads.

VARIATION A: “Above and below”—Te instructor plays a random major third; students form two triads from the instructor’s third, frst by singing a minor third above to form a major triad, and then by singing a minor third below to form a minor triad. Perform the same exercise with minor thirds. Te instructor plays a random minor third; students sing a major third above to form a minor triad, and then a major third below to form a major triad. Practice diminished and augmented triads as well, which are more challenging to form.

VARIATION B: “From the root”—Te instructor plays a random note, functioning as the triad’s root; on a neutral syllable, students sing the instructor’s note and a third and ffth above to form a triad of any predetermined quality. For a greater challenge, the instructor plays a random note; students sing just the third and ffth above the instructor’s played note to form a triad.

VARIATION C: “From the ffth”—Te instructor plays a random note, functioning as the triad’s ffth; on a neutral syllable, students sing the instructor’s played note plus the third and root below to form a triad. For a greater challenge, the instructor plays a random note; students sing just the third and root below the instructor’s note.

VARIATION D: “From the third”—Te instructor plays a random note, functioning as the triad’s third; on a neutral syllable, students sing the instructor’s note followed by the triad’s ffth above and root below to form a triad. Or students do the opposite: they sing the instructor’s note followed by the triad’s root a third below and ffth above to form a triad.

VARIATION E: “It’s all in the filling”—The instructor plays an open harmonic perfect fifth; students sing the “filling” (i.e., the third member) to create either a major or a minor triad. This exercise highlights how a major and minor triad can be derived from the same perfect fifth. Practice forming diminished triads from random open diminished fifths, and augmented triads from random open augmented fifths.

Diatonic Triad Sing-Backs in a Tonal Context

Compared to out-of-context sing-backs, this version trains students to retrieve and sing any diatonic triad from a given tonal context. As with all in-context exercises, the instructor frst establishes the key by playing a key-defning progression (e.g., I–IV–I–V7–I) or asks students to sing the scale to and from tonic or C-to-C scale.

Directions: "From the root up"—After having established the key, the instructor plays a random single scale degree (1–7) functioning as the root of the requested diatonic triad to sing; students sing the instructor's starting note and the third and ffth above to form the diatonic triad. For instance, if the instructor plays 5, students sing the major V chord up and down on scale degrees 5–7–2–7–5 or on solfège or letter names to defne the triad's position.

For a greater challenge, the instructor calls out the note from which students are to sing a diatonic triad, which teaches them to fnd the triad's root on their own. For instance, if the instructor calls out "from 2," students sing: "2–4–6–4–2—mi-nor two chord." To instill functional solmization, have students sing triads from called-out scale degrees on solfège or letter names. Or do the reverse: that is, the instructor calls out a solfège syllable or letter name and students sing back the triad on scale degrees.

VARIATION A: "From the ffth down"—After playing a key-defning progression, the instructor plays the ffth member of the diatonic triad; students then sing a triad down and up from the instructor's starting note. For instance, if the instructor plays 6, students sing the triad on scale degrees 6–4–2–4–6 or on solfège or letter names to defne its position in the scale. For a greater challenge, the instructor asks students to sing a diatonic triad down from a called-out note. For instance, the instructor calls out, "from 6," which forces students to fnd and sing triads from their ffth member.

VARIATION B: "From the third"—Te instructor plays the third of a diatonic triad, and students sing a triad from the instructor's starting note to form a diatonic triad starting from its third member. For instance, if the instructor plays 4, students sing back: 4–2–4–6–4–2" to form the minor ii chord. Students could also sing back the triad on solfège syllable or letter names.

VARIATION C: “Triad hunt”—For a greater challenge, the instructor plays a triad (melodic or harmonic) on the keyboard, for instance, A–C–E. Students then “hunt for” and sing all the keys in which this triad functions. For instance, A–C–E is 1–3–5: the tonic chord in A minor; 6–1–3: the submediant in C major; 2–4–6: the supertonic in G major; and 4–7–1: the subdominant in E minor. Tis is an excellent introduction to modulation and for learning diatonic pivot chords. (“Triad hunt” is a variation of “trichord hunt” introduced in Chapter 4, Section 4: Scalar Fragments)

Seventh Chords—Three Contiguous Trichords = Heptachord

Exercise 5.1.3: Singing Diatonic Seventh Chords

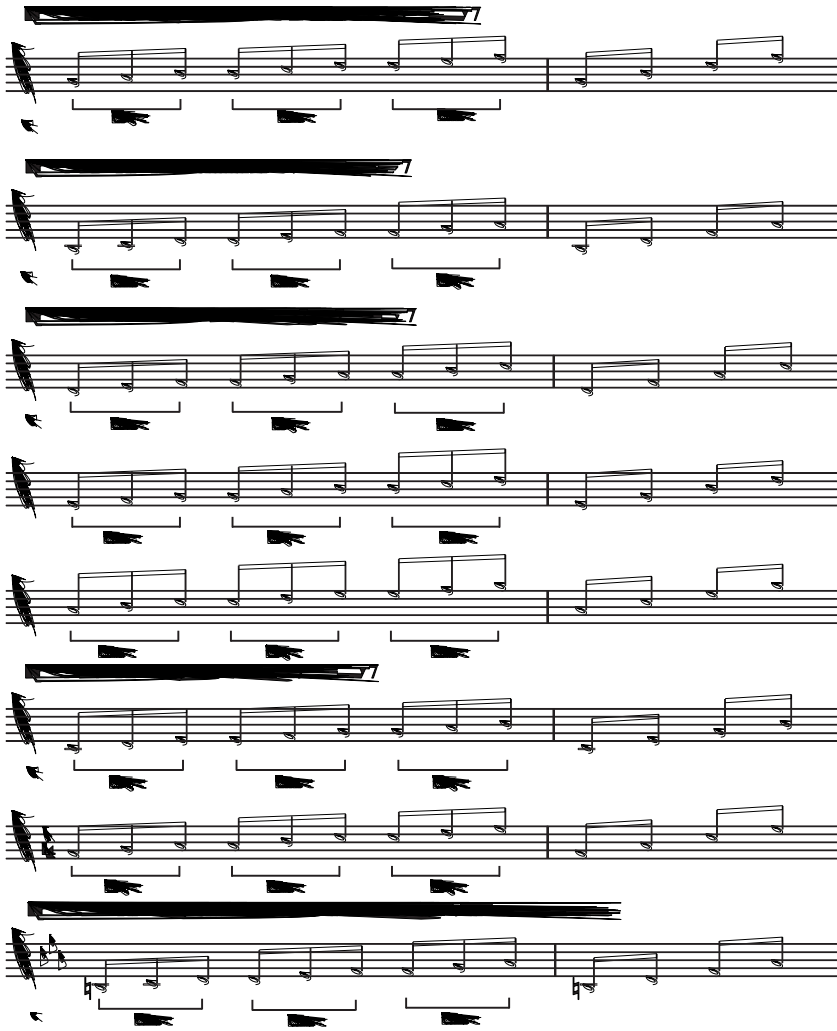
Purpose: Learning the scalar origins, intervallic make-up, and quality of diatonic seventh chords in major and minor modes.

Diatonic seventh chords are conceived as derivatives of three contiguous trichords framed by a heptachord (a seven-note scalar fragment). Seventh chords are organized into five species based on their trichordal make-up. The first four species cover all the qualities of diatonic seventh chords of the major mode; all five species cover the most common seventh chords of the minor mode.[2] They are as follows:

Species 1: Te major-minor or dominant seventh chord
Species 2: Te half-diminished seventh chord
Species 3: Te minor seventh chord
Species 4: Te major seventh chord
Species 5: Te fully diminished seventh chord

Example 5.1.2 illustrates the contiguous trichords that make up the fve species of seventh chords.

Example 5.1.2. Diatonic seventh-chord species derived from trichords.



Directions: Students sing the four species of seventh chords on scale degrees, solfège, or letter names of the major mode as shown in Example 5.1.2. Patterns highlight the trichordal origins of seventh

chords, that is, three contiguous trichords followed by an arpeggiation of the seventh chord.[3]

VARIATION A: Sing trichords and seventh chords from the seventh member down.

VARIATION B: Invent your own heptachord patterns featuring diferent rhythms and melodic patterns.

Exercise 5.1.3a: Diatonic Seventh Chords—As Interlocking Pentachords

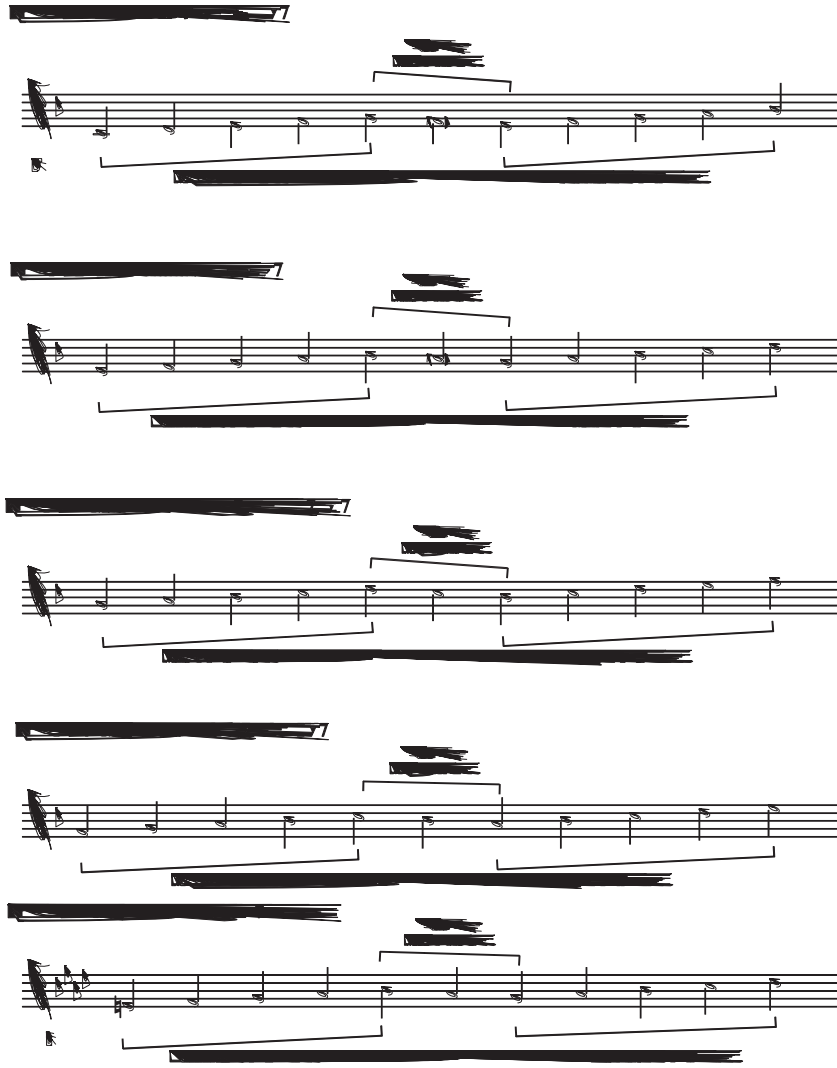
Purpose: Discerning the interlocking pentachords that make up diatonic seventh chords and understanding their role in functional harmony.

Directions: Dalcroze also conceives of seventh chords as two interlocking pentachords, conjoined by a trichord. The lower pentachord is built on the root spanning the first five notes of the heptachord, and the upper pentachord is built from the third member spanning the top five notes. Example 5.1.2a illustrates the five pentachordal species connected by a trichord in the key of F major (the diminished viio7 in F minor). Sing the patterns on scale degrees, solfège, or letter names.[4]

Learning which interlocking pentachords compose each diatonic seventh chord gives further insight into a seventh chord's intervallic make-up and its dynamic function in a tonal context. Take, for instance, the diminished pentachord, which appears in the dominant functioning seventh chords V7, viiø7, and viio7. Te tritone is one of the main reasons these three chords play a key-defning role in a tonal context compared to nondominant functioning seventh chords.

Invent your own exercises with interlocking pentachords in diferent rhythms and patterns.

Example 5.1.2a. Diatonic sevenths with interlocking pentachords and adjoining trichord.



Exercise 5.1.4: Seventh-Chord Sing-Backs—In and Out of Context

Purpose: Aurally identifying and singing seventh chords in and out of a tonal context.

As with triads, we present two methods for identifying and singing seventh chords: (1) out-of-context sing-backs, which are useful for retrieving and singing seventh chords of any quality outside of a designated key, and (2) in-context sing-backs, which sensitize students to a diatonic seventh chord's position and function in a tonal context.

Seventh-Chord Sing-Backs Out of Context

Te following exercise trains students to instantly sing all fve qualities of seventh chords—major, minor, major-minor, half-diminished, and full-diminished seventh chords—outside of a tonal context (other qualities, such as the minor-major seventh, could be included as well). Out-of-context seventh chords can be sung on a neutral syllable or letter names. Te object is for students to sing a seventh chord starting from any of its members—root, third, ffth, or seventh.

Directions: "One more above makes a seventh"—Te instructor plays a random major triad (melodic or harmonic); students sing a major third above (its seventh member) to form a major seventh chord or a minor third above to form a major-minor seventh chord. Te instructor plays a minor triad; students sing a minor third above to form a minor seventh chord or a major third above to form a minor-major seventh chord. Te instructor plays a diminished triad; students sing a major third above to form a half-diminished seventh chord or a minor third above to form a fully diminished seventh chord. From this exercise, students learn to create seventh chords of of a given triad and to identify which seventh chords share the same triad.

VARIATION B: "Tree more above makes a seventh chord"—Te instructor calls out a seventh-chord quality and plays a random note functioning as the seventh chord's root; students sing the requested seventh chord up and down from the instructor's note. For a greater challenge, the instructor plays a random note; students sing just the third, ffth, and seventh above the instructor's note to form a seventh chord.

VARIATION C: "Tree more below makes a seventh chord"—Te instructor calls out a seventh-chord quality and plays a random note functioning as the chord's seventh member; students sing the requested seventh chord down and up from the instructor's note. For a greater challenge, the instructor plays a random note; students sing just the ffth, third, and root below the instructor's note to form a seventh chord.

For the following seventh chord in-context sing-back exercises, frst establish the key by playing a key-defning progression (e.g., I–IV–I–V7–I) or asks students to sing the scale.

Seventh Chord Sing-Backs in Context

For directions, please refer to the section on diatonic triad sing-backs in a tonal context, under Exercise 5.1.2: Triad Sing-Backs In and Out of Context, and replace triads with seventh chords.

Exercise 5.1.5: Morphing Seventh Chords

Te following out-of-context exercise can be practiced for learning to identify and sing seventh chords of any quality. Sing seventh chords on a neutral syllable, solfège syllable, or letter names. (Tis exercise is also useful for learning extended chords—ninths, elevenths, and thirteenths.)

Purpose: Singing and identifying qualities of seventh chords out of context.

Formation: Students stand in a semicircle. Each student (or small group of students) represents one of the four members of a seventh chord: the root, third, ffth, and seventh.

Directions:

STEP 1: Te instructor calls out the quality of seventh chord for students to sing, for example, a major-minor seventh chord. Te instructor then points to each student (or group of students), each of whom represents the chord's members starting from the root up. As the instructor points, students are to sing and sustain their chord member to create a harmonic-sounding seventh chord of the requested quality.

STEP 2: As the chord is being sustained, the instructor calls out another quality, for example, "minor seventh." In this case, students singing the third member must lower their note a half step to transform the chord into a minor seventh. Te instructor calls out another quality, say, "major seventh." Now students representing the third and seventh members must raise their tones a half step to create the requested major seventh chord.[5]

VARIATION A: Students begin by singing a requested harmonic seventh chord and sustain it. Te instructor points a fnger up or down to one of the chord members; students singing that member respond by raising or lowering their member a half step to form a new quality. For example, if students are singing a major-minor seventh chord, G–B–D–F, and the

instructor points a fnger up to the root member, students raise their tone a half step to transform the chord into a fully diminished seventh chord.

VARIATION B: Turn the exercise into an ear training exercise. Te instructor creates three or more seventh chords in a row for students to sing. Afterward, they are to identify the quality of each transformed chord they sang and discuss similarities and diferences in each chord's intervallic make-up.

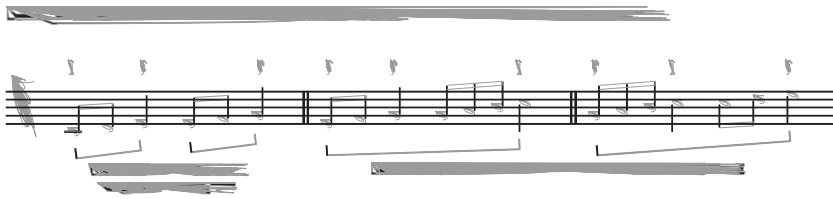
2. INVERSIONS— TRIADS AND SEVENTH CHORDS

In this section, we present a version of Dalcroze's method for conceptualizing triadic and seventh-chord inversions as derivations of scalar fragments, which again highlights their scalar and intervallic make-up.[6]

Exercise 5.2.1: Singing Inverted Triads

Triadic inversions are conceptualized as derivatives of hexachords obtained from inverted trichords. See Example 5.2.1.

Example 5.2.1. Inversions of a major triad.



First inversion: Te triad's lower trichord, C–E, is inverted into a hexachord, E–C, which frames the frst inversion made up of a trichord + tetrachord.

Second inversion: Te triad's upper trichord, E–G, is inverted into a hexachord, G–E, which frames the second inversion made up of a contiguous tetrachord + trichord.

Directions: Sing the following patterns of the major triad: root, frst, and second position, as shown in Example 5.2.1, on scale degrees, solfège, or letter names. Te melodic/rhythmic patterns highlight the trichords and tetrachords that form each triadic position. Apply the same exercise to minor and diminished triads of the major and minor modes.

VARIATION A: Dalcroze recommends accenting the tones that outline the triad, respectively, 1, 3, and 5, as you sing.

VARIATION B: Sing just the notes of the triad (1, 3, and 5) and subvocalize intervening notes.

VARIATION C: Sing the patterns backward.

VARIATION D: Compose your own rhythmic/melodic hexachord patterns to sing.

Exercise 5.2.2: Triadic Inversion Sing-Backs—Out of Context

Purpose: Finding, singing, and comparing major and minor triadic inversions.

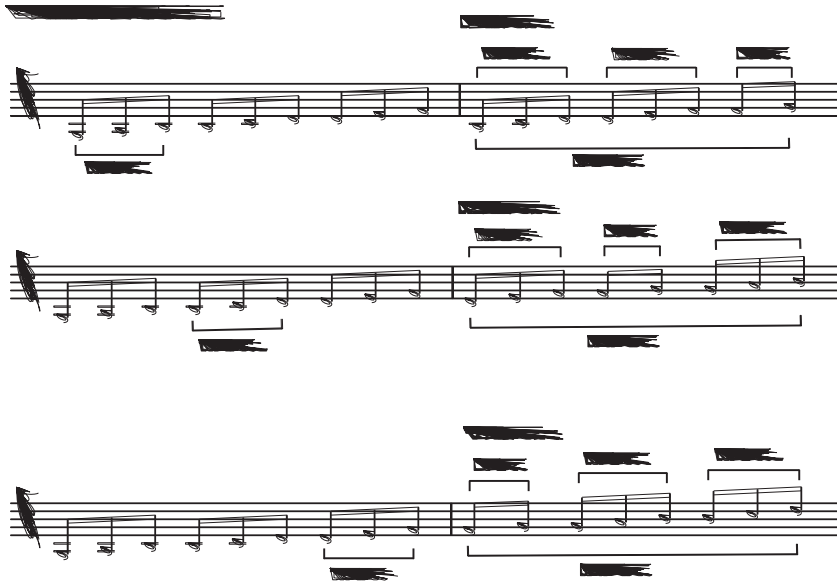
Directions: Te instructor plays a random note on the keyboard and calls out an inversion for students to sing. For instance, the instructor plays a note and says, “Sing a major frst inversion chord from this note.” Students sing the major frst inversion chord up and down on a neutral syllable. Te instructor calls out another inversion for students to sing from the same note, for example, a minor second inversion chord, and so on. Singing diferent inversions from the same note is useful for comparing the intervallic and qualitative diference of major and minor frst and second inversion chords.

VARIATION A: Te instructor plays and calls out the letter name of the note played and asks students to sing a major or minor frst or second inversion chord from the played note on letter names or solfège. Tis is a useful exercise for retrieving, singing, and spelling inverted major and minor triads.

Exercise 5.2.3: Singing Inverted Seventh Chords

Two trichords + a dichord = a hexachord.

Dalcroze conceives of seventh-chord inversions in terms of a hexachord containing two contiguous trichords + a dichord in various arrangements. Example 5.2.2 diagrams the V7 chord and its inversions in the key of C major.

Example 5.2.2. Inversions of a dominant seventh chord.

First inversion: Te frst trichord G–B is inverted into a B–G hexachord, which frames the $^{6}_{5}$ inversion made up of two trichords + a dichord.

Second inversion: Te second trichord B– D is inverted into a D– B hexachord, which frames the $^{4}_{3}$ inversion made up of a trichord + dichord + trichord.

Tird inversion: Te third trichord D–F is inverted into an F–D hexachord, which frames the $^{4}_{2}$ inversion made up of a dichord + two trichords.

Directions: Sing the seventh- chord inversions as shown in Example 5.2.2 on scale degrees, solfège, or letter names. Te melodic/rhythmic patterns highlight the arrangement of contiguous trichords + dichord that form each position. Apply the same exercise to other seventh-chord qualities: major, minor, half diminished, and fully diminished.[7]

VARIATION A: As you sing hexachordal inversions, accent the tones that outline each inverted chord.

VARIATION B: Sing just the notes of the inversion and subvocalize intervening notes.

VARIATION C: Sing the patterns backward.

VARIATION D: Compose your own rhythmic/melodic hexachordal patterns to sing.

Exercise 5.2.4: Seventh- Chord Inversion Sing- Backs

For directions, please refer to Exercise 5.2.2 and replace inverted triads with inverted seventh chords.

3. EMBODYING HARMONIC FUNCTION

Introduction (to the Instructor and Students)

Roman numerals are useful for identifying and labeling the chords that create harmony in a tonal composition; however, our experience with harmony is about much more than simply labeling individual chords. Harmony is about the qualities of motion that arise from the functional relationships between Roman numerals. Many fundamental harmonies we label belong to a select number of harmonic classes or functions, and a chord's function has a profound efect on the way we experience, as performers and listeners, the varying qualities of motion between and through chords on multiple levels. Take, for instance, the basic progression I–IV–V7–I. Tese four chords represent the broad classes of tonic ("T" class), predominant ("PD" class), and dominant ("D" class). Te progression begins on a stable I (tonic) that leads to a IV (predominant), creating motion away from tonic that leads to the V (dominant), which ultimately seeks and fnds resolution in the following I (tonic). In this case, the IV chord is understood as the predominant because it leads to the dominant. Te following movement exercises explore two harmonic progressions fundamental to tonal music from an embodied perspective:

1. T–D–T
2. T–PD–D–T

In the following exercises (performed from either a balanced sitting or standing position), the moving body becomes the progression to viscerally experience the functional relationship among chords.

Exercise 5.3.1: Moving/ Sensing/ Feeling T–D–T Progressions

Purpose: Sensing and feeling motion of varying intensity to and from the dominant.

We begin by embodying one of the most basic harmonic motions of the tonal system—the tonic-dominant-tonic progression: a dynamic movement that entails an active dominant pulling away from and returning back to a point of stability—tonic. Te moving body provides a potent metaphor for vivifying its dynamic profle. As Abramson notes, from an anatomical perspective:

> Tonicity … is defned as a balance between the muscles of the front and back of the body: whereas dominance suggests some kind of excitation of intervention of one muscle against another. Terefore, dominance represents a pull of the center point. If tonic implies sitting up, dominant might then imply a leaning forward, a waiting to return to the center (tonic).[8]

The following exercises are performed in a balanced sitting or standing position, in which the body becomes a T–D–T progression that pulls off of (dominant) and returns back to its center of stability (tonic).

Warm-up: "Motion to and from a sitting balanced center"—Tis warm-up sensitizes you to varying degrees of stability and instability experienced from a balanced sitting position.[9] Begin by sitting on the edge of your chair on your sitz bones with feet planted on the foor in your most centered balanced position—tonic. Practice pulling away from and back to this centered position in diferent directions. For instance: Rock forward then back to your center. Rock back and then return to your center. Note the diference between a progressive forward versus recessive backward motion. Lean to your left, to your right, and in various diagonal directions; circle around from your centered axis in a clockwise motion; circle around in a counterclockwise motion. Feel how your weight transfers of of and back to your center as you move in different directions.

1. Moving T–D–T progressions in a balanced sitting position

Directions: Students begin by sitting in a balanced sitting position as explained in the previous warm-up to represent the stable position of tonic. Te instructor plays a typical T–D–T progression on the keyboard two times with musical expression (either from the four-part examples shown in Example 5.3.1 or from harmonic reductions abstracted from actual music). Te frst time through the progression, students listen without moving; the second time, they perform a physical response appropriate to the progression, that is, leaning away from and then back to their center as the dominant pulls away and returns back to tonic. Encourage students to move in directions and degrees of distance that capture best the intensities of motion heard in the progression.

2. Stepping T–D–T progressions in a balanced standing position

Directions: Students begin in a balanced standing position, either in a semicircle with space to move or scattered randomly about the room. Te instructor plays a T–D–T progression two times (either from Example 5.3.1 or from harmonic reductions abstracted from actual music). Te frst time, students listen without moving; the second time, they step the tonic in place, step out with one foot (in any direction) as the dominant pulls away from tonic, and then rock back into a balanced position as the progression resolves to tonic. Use shorter strides for movement by seconds, such as I–viio6, and longer strides for movement by fourths and ffths, such as I–V, to exact the diference in degrees of distance between the bass motions of chords.[10] Allow your moving body to become the progression. In other words, feel the varying degrees of stability and instability heard in the T–D–T progression in your body's posturing gestures. Make note of how weight transfers of of and back to a balanced standing position. Tonic does not have to return to the same place; you may cycle back to your original position or travel along a path to another point of stability.

Create trajectories through space that physically trace the dynamic shape of the aural progressions you hear. Physicalizing progressions create moving kinesthetic-visual images; we realize harmony is not simply about a series of discrete unrelated chords—it is about the intensities of motion experienced between and through harmonies.

Instructor's Note

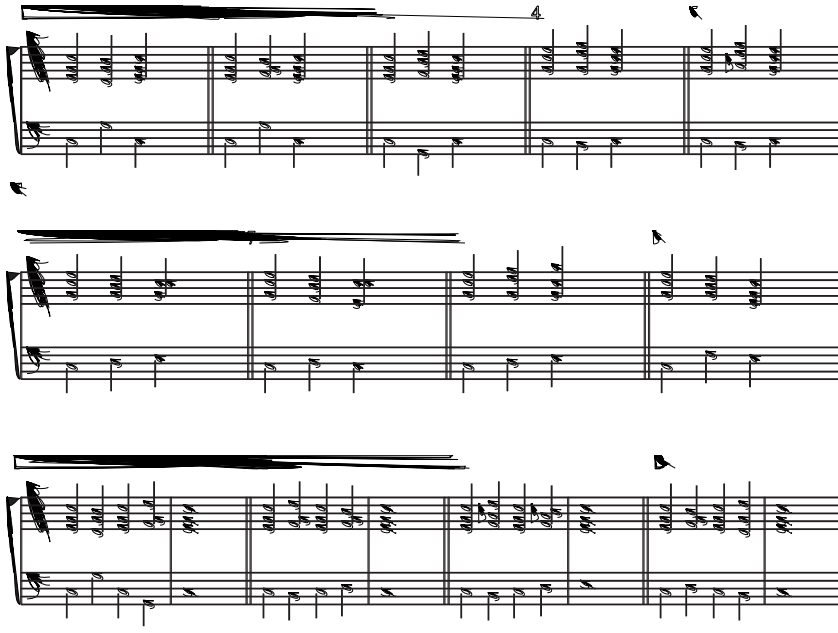
Play harmonic progressions with expression, employing varying degrees of dynamics, articulation, and tempos. Te T–D–T progressions in Example 5.3.1 also can be played in diferent keys and in the minor mode.

Numbers 6, 7, and 8 can be played forward and backward. Encourage students to explore stepping harmonies with diferent touches in diferent directions, and to use their upper torso and arm movements to capture physically the various qualities of motion experienced sonically in the progression. Invent your own progressions with diferent voice leading and elaborations, such as the cadential six-four chord, suspensions, and so on.

Idiomatic T– D– T Progressions

Example 5.3.1 features harmonies that function as dominants, allowing you to make direct comparisons between chords that difer in quality but share the same function. Take, for example, the V_5^6 and viio7 chord. Both are dominant chords, but each "colors" the dominant function diferently. For instance, the viio7 sounds "darker" and "more intense" compared to its dominant counterpart, the V_6^5. Te T–D–T progressions also can be played in minor. Numbers 6, 7, and 8 can be played forward and backward.

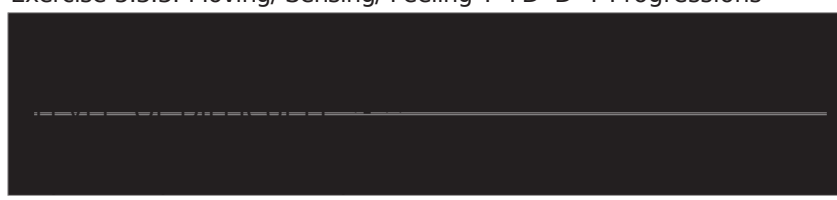
Comparing same functioning chords consecutively trains you (1) to identify harmonies according to tonal syntax (rather than as individual entities) and (2) to distinguish between subtle diferences in quality, which hones your aural harmonic acuity.

Example 5.3.1. Idiomatic T– D– T progressions.

Exercise 5.3.2: Contrapuntal T–D–T Sing- Backs

Purpose: Singing idiomatic contrapuntal bass and soprano lines together. Performing one part while listening to another develops cooperative independence (the ability to maintain your part while hearing another) and teaches conventional voice leading practices.

Directions: Divide the class into two sections (or perform the exercise with partners). One group is handed a series of written idiomatic T–D–T bass lines featuring inverted V7 and the viio6 chords, such as 1–5–1; 1–7–1; 1–2–1; 1–2–3; 3–2–1; 1–4–3. Te other group is handed a series of written idiomatic T–D–T soprano lines that will provide good voice leading with the bass lines, such as 3–2–1; 1–2–3; 1–7–1; 3–4–3; 1–4–3; 5–4–3. Te groups
choose a key and sing their lines together on a neutral syllable (so as to not reveal the notes) to form a two-part T–D–T counterpoint. After singing their lines, each group identifes the other group's line by singing back their line on scale degrees. In other words, the group that sang the soprano line on a neutral syllable then sings back the other group's bass line on scale degrees, and vice versa. (Groups may need to sing their lines together more than once to identify them properly.) After identifying and singing back each other's parts, students also identify the harmonic intervals that they sang together. Tis exercise trains students to coordinate, sing, and aurally recognize idiomatic contrapuntal T–D–T progressions, which also is useful for learning and hearing conventional part-writing practices.

Exercise 5.3.3: Moving/ Sensing/ Feeling T– PD– D– T Progressions



Purpose: Embodying harmonic function.

1. Directions for moving T–PD–D–T progressions in a balanced sitting position

Students begin by sitting in a balanced upright position in their chairs, representing the stable position of tonic. Te instructor plays a typical T–PD–D–T progression two times on the keyboard (either from the four-part examples shown in Example 5.3.2 or harmonic reductions abstracted from actual music). Te frst time, students listen to the progression without moving; the second time, students perform a physical response with the progression, leaning away (in any direction) as the predominant departs from tonic and moves to the dominant, and then back to a balanced upright sitting position as the dominant resolves back to tonic. Tis is a cyclical representation of a T–PD–D–T progression, in which the departure and return to tonic is represented in the same place.

2. Directions for stepping T–PD–D–T progressions in a balanced standing position

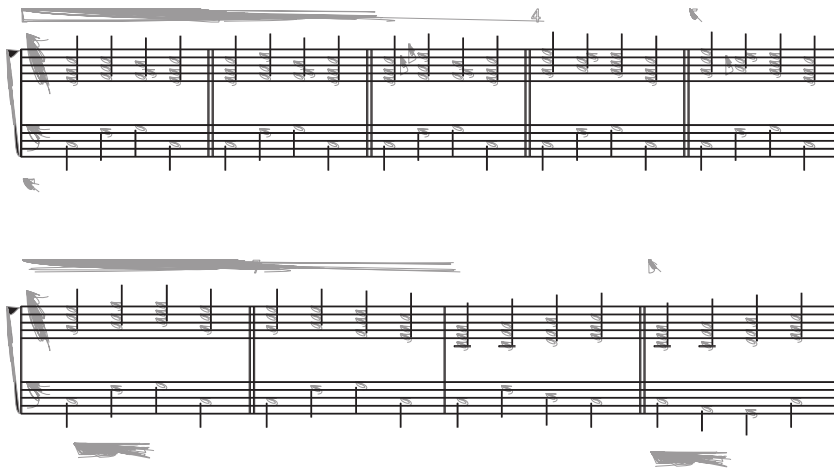
Students begin by standing in a balanced position either in a semicircle with enough space to move or randomly about the room. Te instructor plays a T–PD–D–T progression two times. Te frst time through, students listen to the progression without moving; the second time, students step the progression. For example, a stepped representation could involve stepping tonic in place in a balanced centered position, stepping out with one foot for the predominant (motion away from tonic), stepping out further with the other foot for the dominant, and then resolving back into a balanced position to the fnal tonic. Te fnal tonic could end in a new location or cycle back to the original position. Use shorter walking strides for movement by seconds, such as I–ii or IV–V, and longer strides for movement by fourths and ffths, such as I–IV or ii–V. Allow your physical movements to capture the degrees of intensifcation and de-intensifcation between and through each function throughout the progression.

Idiomatic T– PD– D– T Progressions

Example 5.3.2 features harmonies that function as predominants, allowing you to make direct comparisons between chords that difer in quality but share the same function, for example, the IV, ii6, and Neapolitan chord. All chords function as predominants, but they each provide a diference in harmonic color based on their quality, inversion, and pitch content. As mentioned previously, comparing same-functioning chords back to back

sensitizes you to identify harmonies according to their tonal syntax and to decipher subtle diferences in quality, which hones harmonic hearing. Perform them in diferent keys and in the minor mode.

Example 5.3.2. Idiomatic T– PD– D– T progressions.



Instructor's Note

Te T–D–T progressions in Example 5.3.1 also can be played in diferent keys; however, when comparing two diferent predominants, we recommend playing them consecutively in the same key. Most of the T–PD–D–T progressions also can be played in the minor mode. Invent your own progressions with diferent voice leading and elaborations, such as the cadential six-four chord, suspensions, and so on.

Exercise 5.3.4: T– PD– D– T Contrapuntal Sing- Backs

Purpose: Singing idiomatic contrapuntal T–PD–D–T bass and soprano lines. Performing one part while listening to and identifying another develops cooperative independence (the ability to maintain your part while hearing another) and teaches conventional voice leading practices.

Directions: Refer to Exercise 5.3.2 for directions and replace T–D–T with T–PD–D–T contrapuntal lines. Divide the class into two sections (or perform the exercise with partners). One group is handed a series of written idiomatic T–PD–D–T bass lines, such as 1–4–5–1; 1–2–5–1; 1–4–2–1; 1–2–7–1; 1–6–5–1; 1–6–7–1. Te other group is handed a series of written idiomatic T–PD–D–T soprano lines that will provide good voice leading with the bass lines, such as 1–2–7–1; 3–2–2–1; 3–4–4–3; 5–4–4–3; 5–6–7–1; 3–4–2–1.

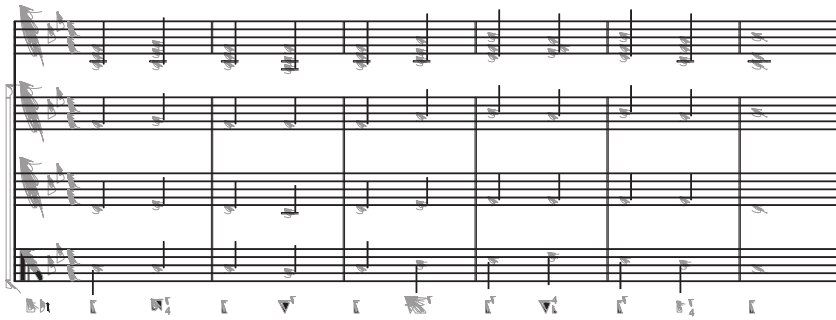
Exercise 5.3.5: Harmonic/Contrapuntal Realizations in Three Voices

Purpose: Aurally discerning both the harmonic and contrapuntal motion of a three-voice texture; distinguishing individual voices within a harmonic texture; analyzing the quality, function, and inversion of chords in a harmonic progression.

Formation: Groups of students stand in three separate lines facing the keyboard.

Directions: First, divide the class into three groups positioned in three separate lines facing the piano. Te instructor plays a three-voiced chord progression (see Example 5.3.3).

Example 5.3.3. A three-part harmony to step and sing, notate, and analyze.



From Stevenson, Pursuing a Jaques- Dalcroze Education— Solfège, Vol. I, 7– 8

Each group is assigned a voice to listen to as the progression is being played. Te group on the left listens to the lower voice, the group in the center the middle voice, and the group on the right the upper voice.

As each group listens, they are to step back when their melodic line descends, step forward when their melody ascends, and bend their knees in place for repeated notes. As students learn the progression, ask them to sing their line on a neutral syllable as they step. Repeat the progression until students can step and sing their parts on scale degrees, solfège, or letter names.[11]

VARIATION A: Transpose the progression into a diferent key; students step and sing the transposed version on scale degrees, solfège, or letter names.

VARIATION B: Have students swap parts so they learn all three voices.

VARIATION C: Divide students into groups of three or four and ask them to compose a rhythmic pattern for the progression. Groups step and sing or sing their composed realizations for the class.

Instructor's Note

First, introduce progressions that move primarily by step. Once students are adept at three-voice progressions, introduce four-voice progressions. Use an open spacing, which makes individual voices easier to discern.

Guided Analysis for Exercise 5.3.4: Harmonic/ Contrapuntal Realizations: Once students have learned the progression, have them analyze it. Tey are to identify the following information for each chord in the progression: (1) root and quality, (2) inversion, and (3) function. As a fnal step, students notate the progression in blocked style or in open score as shown in Example 5.3.3.

4. MODULATION

Exercise 5.4.1: Modulating C-to-C Scales—It's All in the Harmony

Purpose: Modulating C-to-C scales trains you to experience in real time changes in harmonic function, collection, and tonic—essential skills for sight-singing and aurally identifying a modulation with fuency.

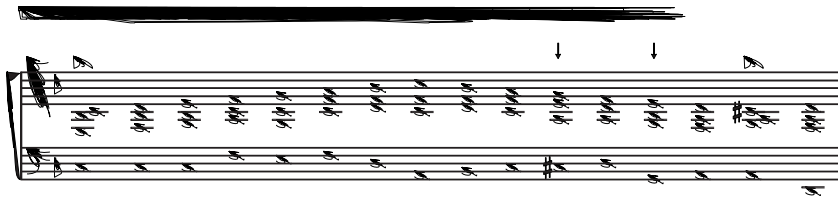
Modulating C-to-C Scales (to the Instructor)

In Chapter 4, C-to-C scales were introduced as an efective pedagogical tool for developing sensitivity to scale degree function and functional transformation. In this chapter, C-to-C scales are revisited as a modulating entity. With a convincing enough harmonization, C-to-C scales can modulate to any close or distant related key.

In this exercise, students listen for and identify a shift in tonic as they sing harmonized modulating C-to-C scales, which trains them to feel and understand the moment-to-moment processing of a modulatory event as it unfolds in a harmonic progression.[12]

Pedagogical Directions:

STEP 1: To begin, give the class a starting dominant seventh chord, for example, a C7 chord, to prompt the F major C-to-C scale; ask students to sing the scale as is typically done. However, harmonize the scale such that it modulates midstream into another key (do not let the class in on your plan, it is best to let them experience the surprise while they sing and to grapple with the unexpected move into another key). See Example 5.4.1, which shows a F major C-to-C scale that modulates to the relative D minor.

Example 5.4.1. A modulating C- to- C scale.

Reproduced with permission from JMTP, Ristow, Tomsen, Urista, 2014, 138.

While singing the scale, students soon discover that they have been forced to move into another key. Most likely, the class will automatically sing the penultimate C♯ (having been persuaded by the previous progression of D minor harmonies), and they will spontaneously want to resolve C♯,the newly appointed leading tone, to D, the newly assigned tonic.

STEP 2: Once students have determined the key to which they have modulated, ask them to sing the scale again and to feel which pitch along the way transitioned them into the new key. Some may vote for G (since it is harmonized with the dominant A7 chord), but most will settle for E, which makes sense, given its predominant status.

STEP 3: To increase the challenge, have the class sing the scale again, but this time minimize your harmonization to only three chords. Begin by giving them the starting dominant C7. Ten play the predominant iio6, followed by the cadential six-four—in other words, the chords that lock in the new key of D minor. Tis stripped-down harmonization illustrates the consequential role the predominant plays in establishing a new key area, especially when followed by a cadential six-four.

STEP 4: Finally, ask students to sing the scale unaccompanied, but encourage them to inner hear pivotal harmonies that direct them into the new key. (As they sing, you may want to softly play the bass line beginning with the C♯ beneath G, to help guide students into internalizing the pivotal move into D minor. It may take several silent hearings for students to instill a modulatory progression into the mind's ear.)

Instructor's Note

After experiencing several harmonized modulating C-to-C scales, students begin to recognize the functional transformation of scale degrees and their ability to lead into a number of new keys. If you are not a savvy improviser, try writing out your harmonization ahead of time, which can be time consuming, but worth the efort. Create harmonizations that demonstrate both diatonic and chromatic pivots, which gives students the opportunity to experience the diference between diatonic versus chromatic modulatory techniques.

VARIATION A: Midstream pivots—Students sing a C-to-C scale, but only to a given note; they then place a fermata on that note, at which point the instructor calls out a new scale degree for them to sing. Students complete the C-to-C scale in the new key and then sing the new tonic.

VARIATION B: For a more challenging version, after the fermata, students complete the C-to-C scale silently and the entire class sings the tonic together.

VARIATION C: For an even greater challenge, ask students to sing the new tonic directly after the fermata. As an intermediary step, ask them to

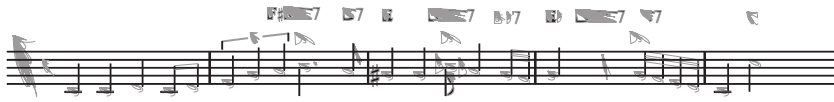
think of any tone as scale degree 5 in the new key. Students sing a C-to-C scale up to a given point, and then sing: “5–4–3–2–1.” At that moment, provide them with a dominant pedal for harmonic support, and then encourage them to hear the harmony on their own. To know whether students are hearing the dominant, ask them to arpeggiate it, “5–7–2–4–2–7–5,” before continuing.[13]

Exercise 5.4.2: Detecting Tonics in Familiar Pieces

Purpose: Identifying new tonics in familiar pieces.

Once students are able to identify modulations into several diferent keys, introduce harmonized pieces from the literature that modulate frequently for them to sing and analyze, such as measures fve to nine of the opening verse of Mel Torme’s “Christmas Song,” which contains several pivots to identify. See Example 5.4.2.[14]

Directions: Ask students to sing the opening phrase (measures one through nine) of the song on solfège, letter names, or a neutral syllable. Provide a harmonic accompaniment at the keyboard as they sing. Ask students to place a fermata on pivot tones (as shown in Example 5.4.2) and to describe what scale degree the tone feels like (in this case, the held tones become scale degree 5 each time). Students decide how to interpret the function and key of each pivot, and sing the tune again on solfège or scale degrees to clarify pivots and keys.

Example 5.4.2. Mel Torme, “A Christmas Song.”

Reproduced from permission by Ristow, unpublished, 19.

Instructor's Note

Students who have mastered the study of C-to-C scales (see Chapter 4) are usually able to feel and identify the function of pivot tones in modulatory passages and tonicizations such as this one, even without the support of a keyboard harmonization.

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5. EMBODYING/ INTEGRATING HARMONIC PROGRESSIONS

Introduction (to the Instructor and Students)

Te following movement/singing exercise is useful for elucidating localized and middle-ground harmonies governing surface details in both monophonic and polyphonic music—harmonies often hidden beneath the melodic surface. Stepping, clapping, and/or singing roots of underlying harmonies articulates their patterns of duration (harmonic rhythm), vivifes the kinetic relationship between individual harmonies, and reveals the progression's overall sense of continuity and direction.[15] Stepping, in particular, is an efective means for clarifying the duration and kinetic life of harmonies, and for embodying the symbiotic relationship between underlying harmonies and surface melody. Pierce elaborates:

> Te stepping action, efervescent in passing the body through space while at the same time articulating a series of focused contacts with the foor, is a simile in movement of melodic-harmonic progression, which makes "horizontal" passage across verticalizing moments that break it into lower-level chords. However simple this stepping dance may be, it makes the same demands on the body as hearing the embedded melodic-harmonic progression does on the ear. In a balanced stance over the support of both planted feet, weight passes continuously, from the moment the music begins, through the entire body, from one supporting foot to the other—centering itself (coalescing) on footfalls but never coming fully to rest over both feet until there is a fnal cadence.[16]

Tere are several ways to perform stepping/singing exercises:

1. Students step and/or sing the roots of harmonies while another student or the instructor performs the piece and you work out a realization together.

2. Students step and/or sing the harmonies to a recording of the piece.
3. Students work alone stepping the harmonies and singing the melody aloud or silently from the score or from memory.
4. Stepping can be replaced with clapping and singing harmonies if space is unavailable.

We present two demonstration pieces (one monophonic and the other harmonic) to illustrate methods for stepping harmonies: the Allemande from Bach's Partita No. 2 in D Minor for Unaccompanied Violin, and the theme from Beethoven's Symphony No. 7, II. Harmonic analyses are placed directly beneath the score, allowing you to make direct comparisons between the abstracted harmonic reduction and the music.

Demonstration Piece No. 1: Bach, Allemande from Partita No. 2 in D Minor for Unaccompanied Violin

Purpose: Recognizing and responding to the implied harmonies in a monophonic texture; embodying the symbiotic interaction between underlying harmonies and the melodic surface.

Stepping and singing the roots of harmonies are particularly useful for clarifying implied harmonies underlying the melodic surface in monophonic music. Monophonic music presents its own challenge to harmonic analysis given the lack of verticality we typically rely on in polyphonic textures to decipher individual harmonies. Harmonies are often hidden beneath melodic figurations, making it difficult to parse out structural tones from their decorative elaborations. In addition, performers can get so caught up in the technical demands (technique, fingerings, intonation) required to execute highly active passagework that they can lose sight of the underlying harmonies that bring a sense of continuity, direction, and flow to the musical performance.

Stepping/singing harmonies implants aural/kinesthetic images into memory that are remembered and later retrieved to inform your analysis and performance. Te aim is to retain these harmonic images in the back of your mind as you perform, enabling you to hold on to the underlying coherence and direction that durational harmonies provide against the moment-to-moment details on the surface.

Directions: Begin by providing a harmonic analysis of the Allemande's A section (or analyze just to the downbeat of measure three). Sketch the roots of local harmonies beneath the staf in a notated rhythm to articulate the chords and their durations (see Example 5.5.1). Ten select a passage, phrase, or section to step and/or sing.

Let us begin by exploring the opening two and a half measures of the Allemande, which opens with a typical T–D–T, followed by a PD–D–T progression to establish the home key. Our rhythmic notation illuminates the durational pattern of these harmonies, which brings their own rhythmic vitality to the opening of this piece—that is, the breaking of two steadfast half notes into a faster-paced anapest rhythm in measure two.

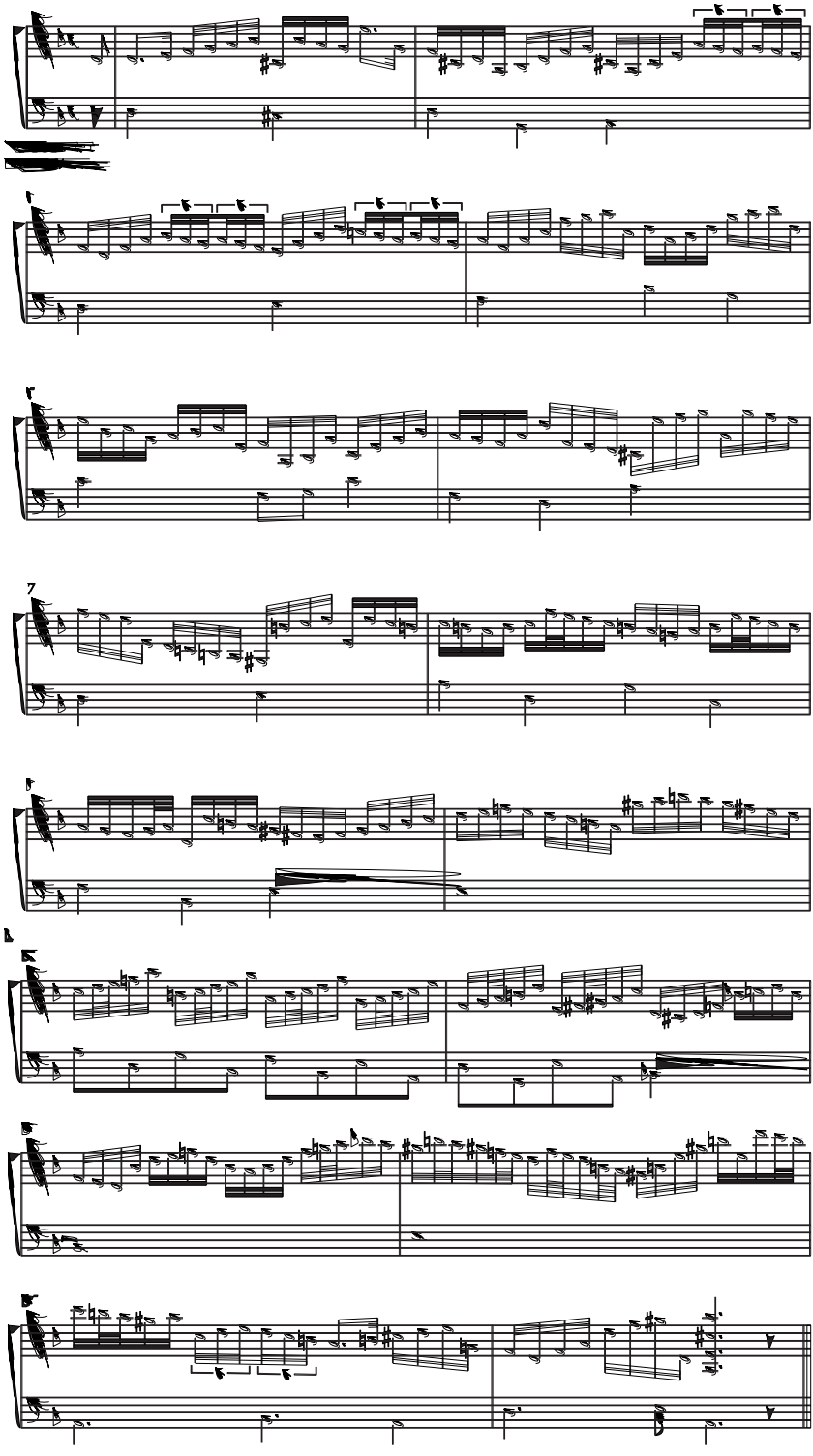
To embody the kinetic life of this progression, consider the following methods:

1. Practice stepping and singing the harmonic roots as someone else performs the passage and work out the realization together (you could also work from a recording).
2. Work on the piece alone by stepping the harmonies and singing the melody aloud or silently from memory or from the score. This method enables you to experience the dynamic interaction of underlying harmonies against surface figurations between your steps and voice.

Begin with both feet planted on the foor. Experiment with diferent foor patterns, directions, and varying degrees of weight and plasticity until you fnd a stepping pattern that captures the inner kinetic life of this passage (as suggested in Exercises 5.3.1 and 5.3.2, use shorter strides for root motion by seconds and longer strides for root motion by fourths and ffths). Step the opening tonic in place, and show the opening half-step to and from the viio7 by stepping slightly back and forward in a rocking fashion; feel the shift in weight to and from the C♯. Enliven the ensuing anapest rhythm in measure two with a dance-like vitality in your steps. Try stepping back into the G minor iv, followed by a step forward into the A dominant V7, and end with a longer stride into the D minor i. Practice stepping and/or singing this durational pattern until you have captured its rhythmic personality.

Now extend the analysis from measure three into the downbeat of measure six, where tonic starts its move into the relative major. Show the stepwise motion leading from D minor i (the pivot becoming vi) to viiø7–I

Example 5.5.1. Bach, Allemande from Partita No. 2 in D Minor for Unaccompanied Violin.



in your steps. Feel the momentary closure on F major in measure four, which is confrmed with more stability in measure six.

Once adept at performing the harmonic durational pattern, turn your attention to how moment-to-moment surface fgurations play of of respective harmonies. As Pierce explains, "While the underlying structure is being clarifed, the foreground—which is expressing it, moving against it, interacting with it—is being vitalized."[17] Te intention is not to remain focused on the harmonies themselves, but to embody the interaction between durational harmonies and melodic fgurations. Listen to how melodic notes and fgures (i.e., runs, arpeggios, leaps, high points, dissonances, notes of stability, etc.) align with and depart from underlying harmonic durations held in your feet and respond accordingly. Feel how these melodic notes and fgures sink in, shift, or pull away from your steps; embody these movements in your feet, knees, hips, upper torso, head, and arms.[18]

Look and listen for other portions of the piece to sing and/or step, for example, the prolongation of A minor spanning from measure eight to the downbeat of measure eleven. Stepping and/or singing roots clarifes the pacing of the descending ffths pattern (moving one chord per beat) whose rhythm stalls midbar in measure nine upon reaching a prolonged dominant that ultimately fnds resolution on the downbeat of measure eleven. Stepping and/or singing the durational pattern of this passage reveals the directed motion of a sequence and prolonging efect of functional harmonies that both bind and pull a melodic passage to a respective point of arrival.[19] As Pierce explains, "Te clarifcation to the ears ofered by stepping the lower-level progressions rewards students, … since they then can actually recognize harmonic motion and respond to it."[20]

Instructor's Note

Encourage students to look and listen for other meaningful segments of the piece to analyze, step, and/or sing, such as signifcant tonal areas, themes, phrases, and so on. In lieu of stepping roots, we also recommend stepping linear bass lines to highlight the sense of direction and coherence that inverted harmonies contribute to the piece.

Other portions to consider realizing include measure eleven to the downbeat of measure ffteen: a descending sequence (fauxbourdon) that releases midbar in measure twelve into the dramatic arrival of a prolonged predominant Neapolitan (the longest-held harmony of the entire A section), which then leads to a prolonged E dominant ninth in measure

fourteen (where the highest point, D6, of the entire piece is reached) that resolves into the downbeat of measure ffteen. Our analysis reveals the broadening efect of these two harmonic functions that are frequently encountered in the ending sections of Bach's works.

Section A is a good assignment for students to refne in its entirety outside of class and perform at a later class period. Stepping and singing main sections or the entire piece allow students to experience the overarching harmonic architecture of the piece as a whole.

Guided Analysis: Once harmonies have been analyzed, discuss other aspects of the piece, such as harmonic and melodic motives and large-scale linear lines that provide cohesion and direction to the piece.

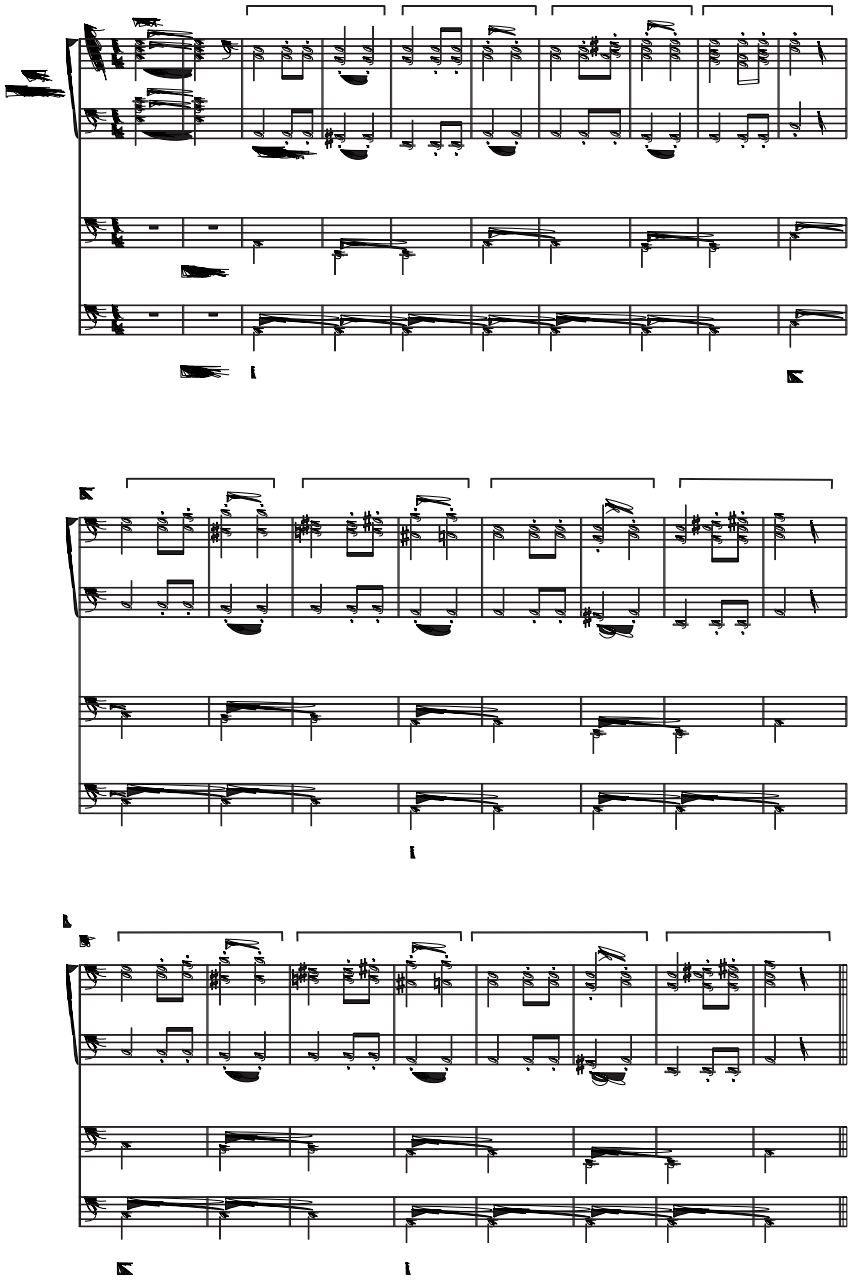
Demonstration Piece No. 2: Beethoven, Symphony No. 7 in A minor, II

Purpose: Becoming aware of the interaction between harmonic durational patterns and formal design.

Directions: Begin by analyzing the harmonies and notating their duration beneath the staf (refer to Example 5.5.2). After completing the analysis, step and sing the root motion of harmonies as you listen to a recording or to someone performing the orchestral reduction on the keyboard. For our purposes, we begin by focusing on harmonies notated at the level shown in line a.

To compare the measurement between tonic-dominant relationships occurring both in the home key and in the relative major, step and rock back with a longer stride to exact the measure of a descending fourth to and from the dominant in measures three to six. Step back with a smaller stride to exact the measurement of a whole step down to G in measure six and forward again with a longer stride to articulate the measurement up a ffth to C. Listen to and feel in your steps the parallel dominant-tonic relationships in both the home key and relative major. Stepping clarifes the tonic-dominant relationship in both keys.

Stepping and singing harmonies at this level also highlights an interesting misalignment starting at measure three between harmonic durations and the two-bar hypermeter bracketed above the staf. Following one measure of tonic, the harmony continues in a two-measure pattern that is of by one with the hypermeter, creating a harmonic rhythm that sustains through the articulation of each two-bar hypermetric unit. Moving one layer deeper, we realize this misalignment also occurs at the

Example 5.5.2. Beethoven, Symphony No. 7 in A minor, II.

four-bar hypermetric level, creating a syncopated efect between harmonic and hypermetrical units at both levels. Finally, this misalignment occurs yet again at the deeper layer between larger-scale tonal events and phrase. See line b in Example 5.5.2, which highlights the motion to and from III. Tis level highlights an interesting interaction in measures three through eighteen between the tonal arc to and from the III and the formal eight + eight phrase structure. Again, we see the relative major III remaining constant, forming a tonal arc spanning across the articulation of these two phrases. Tis misalignment between harmonic and formal design is one of the many subtle aspects contributing to this piece's overall sense of sustained continuity. In fact, the only time a change in harmony does align with its formal structure is at the return of section B in measure nineteen.[21]

CHAPTER 6

Phrase and Forms

Music alive and visible in the human body.
— Spector, 1990

OVERVIEW (TO THE INSTRUCTOR AND STUDENTS)

Tis chapter introduces movement activities that focus on various aspects of musical form. We explore not only formal structure (the grouping of musical spans into motives, subphrases, phrases, and sections) but also the dynamic, expressive nature of groupings (the way in which notes connect and interact within and across boundaries). Dalcroze's rules of nuance, accentuation, and phrasing serve as guides to expressive performance and score reading (see Appendix B); however, their use is not mandatory and should be applied freely, depending on the specifcs of the musical context.

In a traditional aural skills class, students sing and often identify phrases by writing expressive markings in their scores. Adhering to these markings themselves, however, does not guarantee musicality. By introducing movement into the study of form, we begin to sense—kinesthetically—the indefnite varieties of dynamic possibilities "living behind" the notes while we learn a piece. Doing so "shifts the focus away from more abstract symbols of music notation toward the holistic experience of continuous sound motion in relation to our bodies."[1] Movement fosters musicality, which should never be an afterthought—it is the main focus and purpose of an activity.

Moving and watching others engage the aural, visual, kinesthetic, and tactile senses, an "embodied" approach that provides a more holistic representation of musical form than traditional verbal and written representations.[2] What occurs is a spontaneous, living analysis of music—a dynamic sense of temporal continuum, continuity, and nuance. Rather than abstractly talking or writing about the form, we actively create physical representations in which our bodies *become* the form. As Schnebly-Black and Moore explain:

> Multiple body sensations must be aroused to gain—or regain—the full efect of the memory. Only with active sensation can we guide the developing image into an organic whole. If we create images based on cognition alone—named objects and their relationships—our creations will be half-alive, missing subtleties that our senses add.[3]

"Moving analyses" enable us to feel subtle fuctuations in tempo (time), dynamics (energy), and articulation (plasticity) that shape and defne musical form. Te moving analyses are cyclic—formal groups transform into expressive kinesthetic gestures, which in turn transform into expressive musical groupings. Conscious gesturing reveals nonverbal information that is internalized and later used to enhance our musical performance and score reading. As performer/theorist Robert Hatten elaborates:

> Ultimately the performer learns to translate gestural character into sound, through the medium of the body's corresponding (intermodal) gestural realizations. Learning how to perform is thus inseparable from learning how the piece is structured, how it has expressive meaning, how one can physically manifest that meaning in one's body and how one can then transfer that bodily gestural meaning to the instrument. Te goal is to achieve in sound the expressively and implied meaning one has previously explored and experienced through the embodied analytical exercises.[4]

Translating gestural character into musical sound fosters imaginative transference, in which musical events are understood as imagined human actions. When musical events are perceived as human action, they become imbued with their own attendant perceptions and sensations. Consciously applying movement to music heightens awareness through the kinesthetic information perceived in the physical gesture itself. Te mover draws into consciousness the intricate web of kinesthetic connections that exists between bodily gesture and musical

sound. Te movement serves as a temporary exaggeration that pulls out dynamic possibilities that lie deep “within” the musical structure, creating a musical experience where we communicate with music as embodied perceivers, and music communicates back to us as living embodied sound.[5]

Tis chapter divides into three sections: (1) Phrase, (2) Forms, and (3) Plastique Animée. Te frst two sections contain movement exercises, instructor’s notes, and guided analyses. Variations that follow many exercises present gradations of difculty to increase the level of challenge. Five demonstration pieces are included to illustrate how music from the literature is used for specifc exercises. Please refer to Appendix B for the rules of nuance, accentuation, and phrasing that may apply to pieces. Instructors are encouraged to improvise and compose their own music examples as well.

1. PHRASE

Te following movement exercises address the various characteristics of musical phrase. Trough the use of our bodies, we can express the sensations associated with specifc aspects of phrase—boundaries, sense of directed motion, cadence, the integration of parts (beats) into a whole (phrase), motion to and/or from focal points, tension and release, and overall shapes to and from a climactic focal point.

Exercise 6.1.1: Phrase Boundaries (Beginnings and Endings)

Purpose: In this exercise, we learn how music is grouped into phrases, defned by their beginnings and endings.[6] Furthermore, we determine not only where but also how phrases begin and end—that is, we attend to the structural and expressive qualities of their boundaries.

Formation: Place yourselves randomly about the room in the ready position.

Directions: Move in time to the phrases you hear performed. Express the rhythms in your feet using diferent “touches.” As the phrase approaches its conclusion, show through gestures the character of the ending, and then change the direction of your body to start a new phrase; initiate the new phrase with a convincing anacrusis. In this exercise, a change of direction corresponds to a change of phrase. Your physical images depict concretely the abstract concept of phrase.

Point to Remember: Synchronize your physical gestures with the qualitative character of each phrase boundary. In other words, your movements are to expressively “speak” the initiation and completion of the phrase.

VARIATION A: As you walk the rhythms of the phrase in your feet, conduct the meter with your arms. Feel the phrase rhythm in your feet play of of the metric beats in your arms.

VARIATION B: Determine the meter and amount of measures in each phrase. Count the beats—silently or out loud—as you move the phrases, which will enable you to ascertain the amount of measures in each phrase.

VARIATION C: After a few hearings, vocalize the phrases on “la” or a neutral syllable as you step them. If you have memorized the phrases, sing them on scale degrees or solfege syllables.

Instructor’s Note

Tis is an efective exercise for introducing phrase. Use music from a recording or at the keyboard (composed, improvised, or from the literature). Initially play four to eight phrases in duple time of the same length—establishing a normative structure—for instance, a series of two-bar phrases in common time. Do so until students are comfortable. For a greater challenge, play phrases with less clearly defned phrase boundaries or with irregular lengths that involve extensions, interpolations, and truncations. Watch students’ movements and encourage them to invent gestures depicting the phrase’s expressive qualities. Encourage them to watch other students’ gestures.[7]

Guided Analysis for Exercise 6.1.1: After moving to the phrases, discuss or diagram them—with the score or from memory—using traditional labels such as arches, letters, and so forth. Consider these issues: What was the length (the amount of measures) in each phrase? What elements of the music led to weak or strong cadences? What elements initiated a new phrase? How does the performance highlight these aspects?

Exercise 6.1.2: Phrase as Directed Motion

Purpose: In this exercise, we learn that tonal phrases embody goal-directed motion that leads to the cadence. Te path is not always direct; one may encounter detours or obstacles that divert or postpone the arrival of the cadence. Tis exercise instills long-range planning in the hearing and performance of phrase.

Formation: Place yourselves randomly about the room in the ready position.

Directions: Listen to a phrase played at the keyboard. When it concludes, identify a spot in the room—pointing to it with your fnger. During the second hearing, move to the spot at the cadence. Arrive at that spot exactly on the fnal note or chord of the cadence. You are engaging in a cycle of listening to a phrase, fnding a place in the room, and then arriving at that place at the conclusion of the phrase.

VARIATION A: Move to the phrase selecting markers placed on the foor that represent possible cadence points.

VARIATION B: Conduct the meter with your arms as you express the rhythm of the phrase in your feet.

VARIATION C: For a greater challenge, listen to groups of two to four phrases. When a group concludes, fnd places in the room marking the cadence of each phrase, and then arrive at those places at the cadence. Tis exercise builds long-term memory and develops ways to represent the relationship between phrases.

Instructor's Note

Tis exercise is more challenging to perform than Exercise 6.1.1 and is best to use as a follow-up for the next class. Use music from a recording or at the keyboard (composed, improvised, or from the literature). Initially play phrases that are of the same length and tempo, until students are comfortable with the exercise. Varying the length and tempo requires students to adjust their movements accordingly, so as to arrive on the selected spot at

the proper time. Play phrases with detours and obstacles, which students should express physically (e.g., by rocking backward or to the side).[8]

Guided Analysis for Exercise 6.1.2: After moving to the phrases, discuss and diagram them. Consider these issues: What elements contribute to the directed motion that leads to the cadence? Did the performance capture this embodied directed motion? What detours or obstacles delayed the goal of motion? How did the performer express these delays?

Exercise 6.1.3: Cadence

Purpose: In this exercise, we learn to recognize and identify cadences, but more important, we explore the various shades of nuance between them.

Equipment: A short wooden dowel for each participant.

Format: Randomly place yourselves about the room and hold a short wooden dowel in one hand.

Directions: Move freely and walk in time to the music. At the fnal chord of a cadence, use your dowel to touch that of another person.[9]

VARIATION A: Walk to the music and greet another person at the cadence with a gesture (instead of a dowel) to depict the character of the cadence.

VARIATION B: Quick-reaction exercise—After movers are comfortable with four-bar groupings, convert the activity into a quick-reaction exercise. Replace the predictable pattern of four-bar phrases with an unpredictable mixture of two-, four-, and eight-bar phrases. Tis presents a challenge; to represent the cadence at precisely the right time, we have to stay focused and listen for subtle cues that signal whether the phrase is going to close or continue; otherwise, we will not respond to the cadence.

Instructor's Note

It is best to use composed or improvised music for this exercise to control the length of phrases and kinds of cadences played. Perform music that exhibits perfect and imperfect authentic, half, and deceptive cadences.

Encourage students to experiment with diferent gestures that embody the expressive quality of the cadences.

Companion Website: Play Video Clip 6.1.

Video Clip 6.1 Commentary: Tis clip shows students who are acquainted with the exercise. When the movers are sensitive to the types of cadences, diferent physical gestures emerge with subtle diferences in quality. For some types of cadences, the movers touch dowels gently and lightly above their heads; for others, they move swiftly and precisely near the waist.

Some participants represent the efect of the deceptive cadence by bending backward or to the side. Several movers join together at the end to represent the fnality of the last perfect cadence. Some students are more adept than others at negotiating time and space and representing the varying degrees of nuance among cadences. For instance, at the frst cadence, one student incorrectly accessed the time necessary to meet another person. With a few simple suggestions, these kinds of problems are easily rectifed.

Guided Analysis for Exercise 6.1.3: After moving to the cadences, we identify and label them. What cues in the music suggest the expected conclusion of a phrase? Which cadence sounded most conclusive? Which cadence evoked a sense of repose and continuation? Which deceived your expectations about the close of the phrase? Discuss the melodic and harmonic characteristics of authentic, half, and deceptive cadences.

Exercise 6.1.4: Integration of Parts (Beats) into Wholes (Phrase)

Purpose: In this exercise, we attend simultaneously to both small- and middle-scale structures, paying careful attention to the moment-to-moment fow between and through beats, nested within the larger dynamic sweep of phrase. In other words, we recognize how the parts (beats) ft into the whole (phrase).

Formation: Stand in groups of four to eight in a circle facing inward, positioned close enough to pass a ball to one another.

Warm up: Practice passing the ball clockwise to each other. Place the ball into the hand of the person standing next to you.

Directions: Pass the ball at time points corresponding to the beats to the music. Te ball should land in the palm of the next person's hand precisely on the crusis of each beat. Listen carefully to the diferences in dynamics, articulation, and tempo of the music, representing these variations through the passing of the ball. Pass the ball in a diferent direction at the beginning of a new phrase. (In other words, the person who has the ball at the cadence passes it in the opposite direction to initiate the next phrase.) As the ball moves back and forth within the circle, we experience a visual, physical, and tactile representation of continuous integration of beats within phrases; the ball highlights subtle nuances of beat, which interact within the change of direction that shapes phrase structure.

VARIATION A: Convert the activity into a quick-reaction exercise. When you hear the verbal cue "hop" (or a musical cue), change the direction of the ball. Listen carefully for the cue to respond accurately.

Instructor's Note

Tis is a good exercise for introducing the concept of beat (see Chapter 3) and phrase. Use music from a recording or at the keyboard (composed, improvised, or from the literature). Play music that difers in tempo and dynamics. As noted in Chapter 3, this exercise illuminates the three parts of the beat: the anacrusis, the physical preparation of the beat; the crusis, the precise point of contact; and the metacrusis, the moment of rebound and follow-through from the energy exerted from the crusis. Watch students and have them pass the ball with the same degrees of timing, space, and energy expressed in the music. Te ball should become the beat, representing these qualities. Remember, the slower the beat, the more space is available for interpretive latitude. See Demonstration Piece No. 1, which uses this technique.[10]

Demonstration Piece No. 1: Mozart, Piano Sonata, K. 331, I (Opening Theme)

Companion Website: Play Video Clip 6.2.

Video Clip 6.2 Commentary: Experienced students pass the ball easily. Notice how they make adjustments in timing and energy by delaying the arrival of the cruses and/or applying diferent weights to them (representing subtle changes in tempo and dynamic fuctuations). Notice also how the space between beats (the anacrusis and metacrusis) becomes

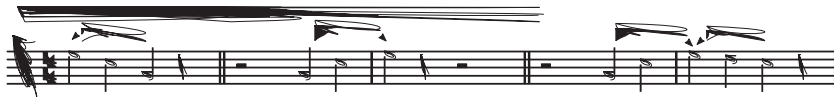
enlivened and fexible when the tempo slows. A change of direction indicates the phrasing and form (rounded binary) of this piece.

Exercises 6.1.5a–d: Motion to and from Focal Points—Breathing, Fountaining, Stepping, and Vocalizing

Exercises 6.1.5a through 6.1.5d address motion to and from a focal point. Focal points are phenomenal accents, such as those produced by high and low points, leaps, duration, harmonic changes, and so forth.[11]

Purpose: We explore moving to and from focal points. We experience kinesthetically the ebb and fow of motion at various hierarchical levels (motive, subphrase, phrase) and learn to control the varying degrees of tension and release.

Example 6.1.1 shows three focal points in diferent locations. Arrows indicate the ebb and fow to and from the focal point.[12] Example a depicts motion from a focal point, Example b to a focal point, and Example c to and from a focal point. Te location of the focal point signifcantly afects the dynamic character of motion. We refer to the shape of motion to and from a focal point as a dynamic profle.

Example 6.1.1 Focal points.

Reproduced from permission by JMTP, Graybill, 1994, p. 9.

In the following exercises, we assign a focal point to musical examples. Before moving to the example, determine its dynamic profle by discerning the location of its focal point and the degree of intensity leading to and away from it.

Exercise 6.1.5a: Breathing

Formation: Stand relaxed, with arms at your sides.

Directions:

STEP 1: Inhale and exhale on diferent counts. Silently count to three as you inhale; count to three as you exhale (a respiratory cycle). Note the point at which your breath shifts from inhale to exhale. Count to other numbers, such as four, six, and eight. Note the building of tension as you inhale and the releasing of tension as you exhale. Consider also the rates of speed at which intensity builds and releases throughout the course of each respiratory cycle.[13]

STEP 2: As you listen to a short musical example, map a respiratory cycle onto the focal point. Listen carefully so that the shift—from inhale to exhale—aligns directly with the focal point.

VARIATION A: Walk the beats as you perform the inhaling-exhaling warm-up. Experiment with asymmetrical proportions. For instance, inhale on the count of six, exhale on the count of three.

Instructor's Note

Short two- to three-measure examples (in duple or triple meter) with a focal high point work best for this exercise and Exercise 6.1.5b that follows. At the keyboard, play excerpts from the literature, or use composed or improvised music to control the dynamic profle and length of example.

Exercise 6.1.5b: Fountaining

Formation: Stand with palms pressed together in front of your body as if in prayer; as the motion approaches its focal point, lift your hands up over your head, coordinating the highest point of your motion with the focal point, and then allowing your arms to foat back down to your sides as the motion ends.[14]

Directions: Listen to a passage in duple or triple time performed at the keyboard, inhaling while raising your arms to the focal point, and exhaling while lowering your arms back to your sides.

VARIATION A: Sing on neutral syllables as you move and shape the musical fow with your arms. Increase and decrease the degree of intensity as you approach and leave the focal point.

VARIATION B: Walk the metrical beats as you outline (with your arms) the motion to and from its focal point. Sense the interplay between your arms and feet of the dynamic ebb and fow. Note how the motion in your arms pulls through and across the metric beats in your feet. As Dalcroze explains, “Te external meter must be subordinated to the free and continuous expression of inner rhythm.” Allow the elastic surface rhythms to play of the fxed metrical pulse.

VARIATION C: Experiment with other shapes with your arms to depict the musical example’s dynamic profle.

Instructor’s Note

Exercises 6.1.5a and 6.1.5b serve as excellent warm-ups for teaching the dynamic motion of phrase.

Exercises 6.1.5c–d: Stepping and Vocalizing

Listen and step to the musical example, moving to and away from its focal point. Represent the example’s dynamic profle by moving in different directions and with varying degrees of timing, energy, weight, and plasticity.

Vocalize the example either on a neutral syllable or with a pitch; make sure your vocalizations refect the motion as it ebbs and fows to and from its focal point. Te following Demonstration Piece illustrates stepping and vocalizing a phrase from the literature.

Demonstration Piece No. 2: Bach, Prelude in F minor, WTC 2 (Opening Phrase)

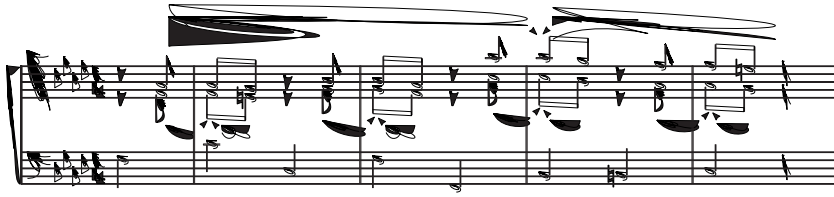
For this piece, consult Nuance Rule #6; Accentuation Rule #4; and Phrasing Rules #1, #5, and #9.

Example 6.1.2 presents measures one through four of Bach's Prelude in F minor, which shows a two-tiered hierarchy of dynamic motion. Te phrase contains four 3-note subphrases. Te focal points occur on the second note of each subphrase (denoted by the arrows beneath the staf). Emphasis on the second note results from suspended upper voices over a change of harmony. Te focal point is further reinforced by the metrical accent. Te subphrases compose a short "anacrusic" that fows to a "crusic" focal point giving way to a weaker "metacrusic." Tese subphrases unfold within the larger sweep of the phrase, moving to and from its climactic focal point (measure three, indicated by the larger arrows above the staf).

Step the example. Focus on the four 3-note subphrases and examine their dynamic profle. Sing them silently as you experiment with diferent steps to convey the qualitative diference between the three notes. For example, the initial anacrusis corresponds to a tapping of the right foot, the following crusis to a pressing of the same foot into the foor, and the fnal metacrusis to the left foot stepping backward. A possible pattern for each subphrase is right-tap, right-press, left-step back. Experiment with other movements involving changes of direction, curved- and straight-fow paths, and varying degrees of timing, energy, and weight. Try to achieve subtle adjustments in timing and energy by slightly delaying the arrival of the focal point or putting more weight into it.

Express the subphrases in the broader sweep of the phrase, indicating its climactic focal point in measure three. For instance, show the tension of the octave leap to the focal point with a larger, amplifed motion; use a smaller movement to indicate the dissipation of tension into the cadence. Sense the balance between lower and higher levels by feeling the smaller gestures as parts of a larger single motion; this will highlight the levels of the gestural hierarchy.

Vocalize the example. Combine vocalizations with movements. Using diferent syllables, experiment with diferences in timing and intensity to indicate the two levels of hierarchy.[15] Remember that the motion to and from focal points is fexible. Mapping movement and speech patterns onto the music reveals to us embodied sensations and perceptions "living" within Bach's phrase. Perform your renditions for each other. Improvise spontaneous exchanges of physical and aural impressions between performer and mover.[16]

Example 6.1.2. Bach Prelude in F Minor, WTC 2.

Instructor's Note

For Exercises 6.1.5c and 6.1.5d, use music from a recording or at the keyboard (composed, improvised, or from the literature). Initially use musical examples that move to and from a clear focal point. Ten introduce examples with a more complex dynamic profle that have more than one focal point at diferent hierarchical levels. Exercises 6.1.5c and 6.1.5d are more demanding to perform than Exercises 6.1.5a and 6.1.5b and are good assignments for students to work on outside of class. Encourage students to move and vocalize passages from music that they are studying to explore interpretive possibilities.

Guided Analysis for Exercises 6.1.5c–d: After stepping and vocalizing a musical example, discuss and identify subphrases and phrases, using arrows to trace movement to and from focal points in the score. Consider these points: Where do focal points reside? What elements create a focal point? Which focal points are greater than others? Show hierarchical levels using diferent arrow sizes (see Example 6.1.2).

Exercise 6.1.6a: Climactic Focal Point in Phrase

Purpose: In this exercise, the nylon cord is an elastic extension used to express the varying degrees of tension and release in the muscles. With this tool, we learn to control the degrees of intensity leading to and from the climactic focal point of a phrase.[17]

Warm-Up: Practice alone or with a partner; hold each end of a nylon cord. At the beginning and end of the musical example, keep the cord taut but not stretched. After choosing an appropriate tempo, practice extending and retracting the cord on diferent counts, such as eights, sixes, and fours. For instance, as you count from one to eight, extend the cord to its maximum on eight; count again, and retract the cord as you return to the starting position (on eight). Speak the numbers as you extend and retract the cord, corresponding to crescendo and decrescendo, respectively. Perform the exercise again but reverse the dynamics. What did you notice about the way you used your muscles?

Directions: Listen to the phrases; extend and retract the cord in various confgurations to represent difering dynamic profles. Pay careful attention to the most intense climactic moments, which correspond to the largest stretch of the cord.[18]

Analytical Demonstration: Pairs of students perform interpretations of the same phrase; their diferent kinesthetic responses to the same phrase reveal diferent dynamic possibilities, possibilities that open up new avenues of interpretation. Discuss each other's performances. What did one pair bring out in their performance that another did not? What was particularly efective? What was not?

Instructor's Note

Pieces from the literature, as well as composed and improvised music, work well for this exercise and for Exercise 6.1.6b.

Exercise 6.1.6b: Climactic Focal Point in Phrase

Purpose: Tis exercise uses similar motions with a Chinese jump rope. Te stretch allows us to feel the qualities of plasticity, the sense of sustained momentum, and the varying degrees of intensity to and from the climactic focal point of a phrase.

Formation: Stand in a circle (in groups of four to eight) holding a Chinese jump rope (taut but not stretched).

Warm-Up: Refer to warm-up for Exercise 6.1.6a.

Directions: Listen to the piece; expand and contract the rope to represent the phrases. After becoming familiar with the piece, represent the overall shape of the piece through an improvisation. While expanding and contracting the rope, experiment with difering heights and tensions to depict the expressive qualities of the phrases.

Instructor's Note

Some students will focus on details of gesturing, for instance, on how much space to traverse while raising the rope. Encourage them also to create a unifed movement, in which everyone follows the music as they would in a real-life ensemble setting. Exercise 6.1.6b is more challenging than Exercise 6.1.6a because participants have to synchronize their interpretation as a group. Tis is an excellent out-of-class assignment to assign to groups of four to six students to perform for one another in the following class.

Guided Analysis for Exercises 6.1.6a and 6.1.6b: Perform your interpretations for each other. Discuss the details of the students' representations. When was the most tension exerted? How long was the tension sustained? Where in the piece were the greatest points of climactic intensity? Indicate phrases using arrows to and from climactic focal points in the score. Refer to the following Demonstration Piece No. 3.

Demonstration Piece No. 3: Schumann, Mondnacht No. 5 (Liederkreis, op. 39)

Portray the shape of the phrases and subphrases to and from focal points. (Refer to the score for the following analysis) Te opening phrase (measures six through thirteen) divides into two subphrases. Te frst begins on the last beat of measure six and peaks on the F#5 (measure nine) on the word "Himmel." Te second subphrase responds and rises to E5 in measure eleven, which corresponds to the melodic peak F# of the frst subphrase.

Companion Website: Play Video Clip 6.3.

Video Clip 6.3 Commentary: In this clip, students are familiar with the piece and work out the phrasing. Some are more successful than others in representing F# as the climactic focal point. Te female student on the right clearly does not know the piece well enough to produce a convincing

kinesthetic response. Others respond by arching back and expanding their chest to the opening of musical space as the melodic line rises to the word "Himmel." Note how this movement depicts the feeling of weightlessness that corresponds to this focal point. Notice also that the movers reserve the widest expansion of the rope for the moment of greatest climax, creating an image that corresponds to the overall shape of the piece.

Eventually, students will come to a place of agreement and work out a unifed movement where everyone follows the music perfectly, just as they would in a real-life ensemble setting. Once students get to know a piece, they also sing it without the recording while performing this exercise. Another efective interpretation, not depicted in the demonstration, would have involved physically sustaining the tension of the rope from the highpoint F# through the E in measure eleven down to the B4 in measure thirteen to represent the entire eight-bar phrase as a single unifed whole.

2. FORMS

Exercise 6.2.1: Musical Period: The Antecedent-Consequent Relationship

Purpose: In this exercise, we create physical representations of periods that highlight the interdependent relationship between antecedent and consequent phrases.

Formation: Place yourselves randomly about the room.

Directions: Walk to the rhythm of the period. Choose a partner to meet at the end of the antecedent and consequent phrases. At the end of the antecedent, use an open-ended gesture to express the half cadence. When you return to your partner at the conclusion of the consequent, modify the antecedent's concluding gesture to depict the closure on the tonic. Trough these movements, we create a physical representation of interruption—a motion to a dominant, a cessation of that motion,

followed by a resumption that leads to fulfllment of tonal motion at the authentic cadence.

VARIATION A: Represent the antecedent and consequent phrases by yourself, walking the antecedent phrase to a spot in the room that represents the half cadence; for the consequent phrase, return to your original starting point at the authentic cadence. Tis movement refects the metaphor of moving away from and returning to tonic.

Exercise 6.2.2: Sentence—Basic Idea, Basic Idea Repeated, and Continuation

Purpose: We become aware of the one + one + two proportion of a sentence: the basic idea (bi), the basic idea repeated (bi'), and the continuation (cont).[19] Movement allows us to feel the dynamic profle of each part and their relationship to each other.

Formation: Stand facing one another in a triangle; one person holds a ball.

Directions: Te person with the ball shapes the basic idea (bi) with his or her arm (the ball leads the way); the person then drops the ball in the hand of a second person on the frst beat of the repeated basic idea (bi'). Te second person likewise moves the ball through space, dropping the ball in the hand of the third person on the frst beat of the continuation. As we pass the ball to each other, we express the breaths that articulate the basic ideas and the continuation. Take turns so that each person assumes the role of the basic ideas and continuation.

VARIATION A: Repeat the same exercise with phrase overlaps (an "overlap" is a phrase ending that serves simultaneously as the beginning of the next phrase). Te frst person hands the ball to the second person at the cadence, a gesture that expresses the overlap. Doing so allows each person to feel the overlap as a point of repose, as well as of initiation.

Instructor's Note

For Exercises 6.2.1 and 6.2.2, use excerpts from the literature or composed or improvised music. Composed or improvised music allows you to regulate the amount of periods and sentences played as students learn to represent the dynamic shapes of these forms.

Exercise 6.2.3: Binary Form—Dancing the Minuet

In this exercise, we use dance steps of the minuet to learn binary form. Tere are several versions of the dance; for now, we use a basic sequence of steps that work with Bach's Minuet in G, as well as other minuet forms.

Purpose: In this exercise, we move to a binary form, either simple or rounded. Our steps depict the dance rhythms and our movements concretely articulate the form.

Formation: Stand in pairs in a circular formation, with everyone facing in the same direction.

Directions: Dance to Bach's Minuet in G. Practice the following steps; the pattern unfolds in two-measure groups:

1	2	3	//	1	2	3
step,	bend,	step	//	step,	step,	bend
R	R	L		R	L	L

First, listen to the piece and determine the form. Decide how to gesture the longer duration of the cadences for each phrase. When practicing, you may want to rearrange the steps to refect diferent patterns of strong and

weak beats with the measure. For instance, the pattern could become step, bend, step // step, bend, step, and so forth.

Dance the piece with a partner, moving clockwise in a circle (follow the steps outlined earlier); be sure to indicate phrase endings in your movements. For the B section, change direction and fnd a new partner. For rounded binary, show a1 by returning to your original direction and partner.

Instructor's Note

It is best if students practice the dance steps frst, before moving together in a circle. Tis is an excellent out-of-class assignment for students to prepare for the following class. Te exercise can be performed with other dances from suites, such as the Sarabande, Allemande, Bourrée, Courante, and Gavotte.[20]

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3. PLASTIQUE ANIMÉE

When the body has completely submitted itself to music, it is sometimes as though it had been created by it.

— Claudel, 1913

Introduction (to the Instructor and Students)

Plastique animée is an unstylized choreography that develops improvisational skill and expressive artistry. Compared to other structured guided exercises, plastique animée promotes expressive freedom through improvisation. Te literal English translation of plastique animée is "moving plastic," but when used for artistic purposes, a more applicable translation is "expressive movement." Te technique engages students in a real-time interpretive analysis of a musical composition. As Dalcroze explains: "Te main thing is that the emotions, which have inspired the sound rhythms and the form in which they have taken shape … should be reproduced in their plastique representations, and that the same life force should animate sound music and the music of gesture alike."[21]

Plastique animée begins with exploratory improvisation. Participants work alone, with a partner, or in small groups and represent the dynamic form of a piece through bodily motions. Trough this process,

they sense the varying degrees of timing, tensions and releases, dynamics, and articulations of the musical fow. As Dalcroze advises, "It is not enough that plastique should be superimposed upon music. It should spring spontaneously from it, become involved easily with its external forms, adapt its style to that of the music and translate all its shades of feeling."[22]

After experimenting with various improvisatory gestures, the group decides upon a physical representation and performs their interpretation for other groups. Te result is a real-time interpretive analysis—a living, moving representation of musical form, in which sounds become afective gestures and, conversely, afective gestures become musical sounds. Participants draw upon kinesthetic sensations and feelings, experienced consciously through movement, which they later drawn upon subconsciously to enhance future listening and performing experiences.
Demonstration Analysis: Participants assess the performances of others. Are the movers listening intently? Do their gestures refect the character of the passage being performed?

Two Examples of Plastique Animée

Following are two examples of plastique animée; the frst involves a pair of students, the second a solo performer. Tese examples serve as guides for plastique animée interpretations.

Demonstration Piece No. 4: Imitation and Canon (Pair): Bartok, "Song of the Harvest" (from Forty-Four Duos for Two Violins)

Te video clip portrays an interpretive analysis of Bartok's "Song of the Harvest" (refer to the score). Te piece consists of fve sections. Te frst (measures one through fve) returns in an inverted and transposed form in measures 16 and 30. Between these sections are two faster, canonic eruptions (marked parlando) in measures six through ffteen and measures twenty-one through twenty-nine.

Companion Website: Play Video Clip 6.4.

Video Clip 6.4 Commentary: Te clip shows a performance worked out by two experienced students. In this analysis, the two moving bodies represent the canonic voices of two violins. Note how the movers negotiate the space of the room, interacting with one another to represent the beginnings and endings of these fve sections.

In this representation, the students use a wringing gesture; the stretch of a nylon cord corresponds to the ebb and fow to and from focal points within sections. Teir more sustained motions depict the calmer (and softer) lento sections, followed by a series of abrupt torso bends that characterize the aggressive, angular contour of the più mosso parlando canonic sections.[23]

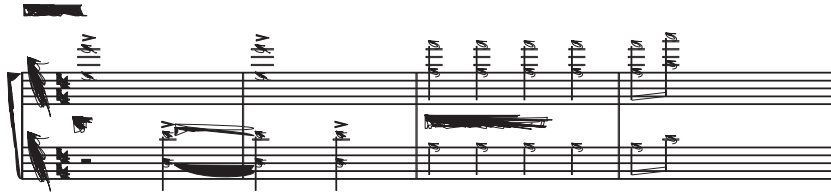
Demonstration Piece No. 5: Free Form (Solo): Copland, “Gun Battle” (from Billy the Kid)

Companion Website: Play Video Clip 6.5.

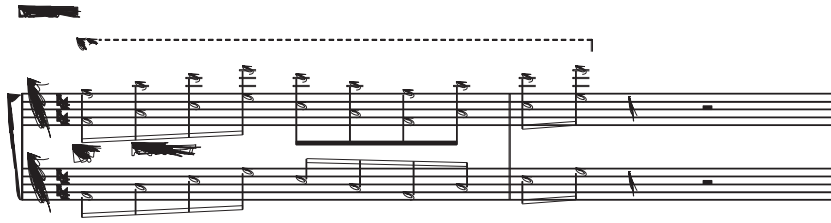
Video Clip 6.5 Commentary: Te clip shows a polished solo performance of plastique animée. Consider that Copland is writing about a gun battle, involving perhaps a contrast of cannon gunfre and machine-gun gunfre. Te mover uses her body to portray these two types of gunfre, depicted in percussion instruments. She begins by expressing the opening counterpoint between bass drum and snare with her legs and arms; a widened (bow-legged) stance represents the fuller sounds of the opening drum strokes. Note how the full range of motion in her legs shows the weight of the “heavy” bass drum exclamations (the cannon), in contrast to the more restrictive forearm gesticulations that display the “tighter” snare (the machine guns).

In particular, consider how she afectively animates the following motives through bodily gestures. In her rendition, the gestures in her body become the musical motives:

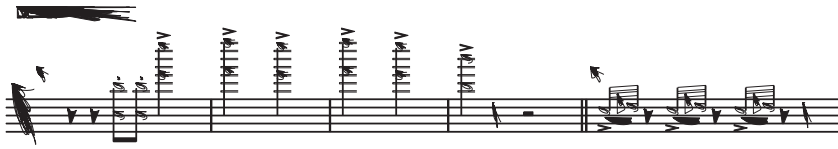
1. She expresses the opening fourth of Motive A (E to B) through the opposing, directed motions of her arms and the concluding part of the motive (the repeated notes) by shaking her fsts (see Example 6.3.1).

Example 6.3.1 Motive A Copland.

2. She portrays the graceful rise and fall of arpeggiations in Motive B through a fuid tilting back and forth of her head (see Example 6.3.2).

Example 6.3.2 Motive B Copland.



3. She uses shoulder shrugs for the restricted stepwise motion in Motive C (a and b) (see Example 6.3.3).

Example 6.3.3. Motives C (a and b) Copland.

Te concluding passage suggests a fnal volley of the cannon, represented by her series of crouches (mirroring the gunfre) that place her close to the foor. With each dying shot, her knees strike the foor; and with the fnal dying shot, she collapses under the weight of her body.

Both examples of plastique animée illustrate how the entire body may be used to portray the dynamic quality of form. Trough the precise and expressive artistry of both examples, we see and feel the sounds we hear in their moving representations.[24]

Additional Plastique Animées

See the Companion Website.[25]

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1. Play Video Clip 6.6: Berlioz, Symphonie fantastique, II, London Symphony Orchestra, Valery Gergiev.
2. Play Video Clip 6.7: Debussy, Violin Sonata, I Catherine Leonard and Warren Jones from Camerata Pacifca.
3. Play Video Clip 6.8: Saarahio, Vent Nocturne, per viola ed elettronica, 1 Sombres miroirs Nimrod Guez and Josh Martin.

Suggested Pieces from the Literature

Exercises 6.1.1 and 6.1.2

Beethoven, “Ode to Joy” (also for period and rounded binary)
Brahms, “Haydn” Variations, Teme (also for period)
Dvorak, Symphony No. 9 in E minor “From the New World,” ii Largo (also for period and rounded binary)
Mozart, Rondo Alla turca (also for binary)
Chopin, Waltz in A minor (also for period)

Exercise 6.1.3

Mozart, Sonata K. 331, opening theme (also for rounded binary)
Mozart, Rondo Alla Turca, K. 331, iii
Beethoven, Piano Sonata in Ab, Op. 26. i

Exercise 6.1.5a– d

Brahms, Waltz in A-fat major, Op. 36, No. 5
Brahms, Waltz in F# major, Op. 39, No. 1
Chopin, Waltz in A minor, Op. 34, No. 2 (also for musical period)
Chopin, Mazurka in B-fat major, Op. 7, No. 1

Exercises 6.1,6a and 6.1.6b:

Grieg, “Te Morning Song”
Chopin, Prelude in B minor
Chopin, Piano Concerto No 1, ii, opening theme
Schumann, “Mondnacht” (Demonstration Piece No. 2)

Exercise 6.2.1

Chopin, Waltz in A minor, Op. 34, No. 2
Beethoven, “Ode to Joy” (also for rounded binary)
Brahms, “Haydn” Variations, Teme
Dvorak, Symphony No. 9 in E minor “From the New World,” ii Largo (also for rounded binary)
Mozart, Eine Kleine Nachtmusik, K. 525, ii

Exercise No. 6.2.2

Beethoven's, Bagatelle in G minor, Op. 119, No. 1
Brahms, Symphony No. 3, ii
Mozart, Piano Sonata k. 283
Mozart, Lacrymosa, Requiem

Exercise 6.2.3

Dvorak, Symphony No. 9 in E minor "From the New World," Largo (also for rounded binary)
Mozart, "Alla turca"

APPENDIX A

Practical Considerations

ROOM DIMENSIONS

Room and class size are important aspects to consider when integrating movement into your classroom. Exercises fall under two categories: (1) movement that occurs in place and (2) movement that occurs through space. If you are limited to a small classroom only, teach movement activities in place. Encourage students to work on movement exercises that require space outside of class. If space is available to you, the following chart calculates a room-to-class-size ratio that is suitable for teaching all movement exercises that require space.
Rule of Tumb: Do not overcrowd a room with too many students when doing movement exercises through space.

Room dimensions	Number of students
26′ × 40′	15– 18

CLOTHING

It is best to move barefoot or in your socks. Tis enables you to feel the balance centers in your foot when making contact with the foor. In a typical eurhythmics class, wear loose comfortable clothing; however, this requirement may be impractical and not necessary for a typical aural skills class.

EQUIPMENT

Many exercises require no equipment, but for the ones that do, the following list covers everything you need to teach any of the exercises presented in the book:

1. Tennis balls or rubber balls (i.e., a ball small enough to hold in the palm of your hand that has a good bounce)
2. Hacky sacks
3. Nylon stockings—preferably two tied together
4. Wooden dowels—preferably cut six inches long and three-quarter inches in diameter
5. Chinese jump rope
6. Bungee cords
7. Percussion instruments

APPENDIX B

Rules of Nuance, Phrasing, and Accentuation

Te following rules derived from Dalcroze's pedagogical manuals were directly infuenced by theorist Mathais Lussy's treatises on expressive performance. We view these rules not as ironclad directives, but rather as suggestions to encourage expressive performance and score reading. Tese rules are particularly germane to music of the seventeenth to nineteenth centuries and can be modifed or disregarded depending on the musical context.[1]

RULES OF EXPRESSION

1. Rules of Nuance
2. Rules of Phrasing
3. Rules of Accentuation

Rules of Nuance

1. All ascending melodies must be sung with a crescendo, descending melodies with a diminuendo.
2. In a strongly accented rhythmic passage, the nuances of crescendo and diminuendo must be lessened.
3. A prolonged note in an ascending passage receives a crescendo. If the note following descends, there is a crescendo followed by a decrescendo.
4. A crescendo occurs when a note is repeated several times.
5. When a repeated note passage brings back the initial melody, the crescendo also has a rallentando.

6. If a rhythmic and melodic group is repeated a second time, it should be sung with a diferent nuance.
7. Te preparatory fgure that leads into the return of a melody must be done rallentando.
8. Where a melody ends with a conjunct series of notes of the same duration, the last of these notes must be dotted (shortened). If these notes precede the return of the melody, they must also have a rallentando.
9. When a succession of notes of equal value leads into the return of a melody whose frst notes are of double duration, the rallentando of the connecting passage must be great enough that its last notes become of double duration.
10. If a series of ascending notes of equal duration occurs, in a section composed of unequal notes, it is necessary to accent each of these notes.
11. When a descending melodic passage brings in a powerful theme, the passage is sung with a crescendo. When an ascending passage brings in a gentle theme, the passage is sung decrescendo (contrary to Rule #1).
12. In a piece ending with a series of isolated notes in measures containing rests, there must be a rallentando in the rests.
13. In a pattern of two diferent slurred notes of equal value, the notes are in an order of strong-weak.

Rules of Phrasing

1. When a rhythmic group is repeated, one must observe a slight break before the repetition. (Combine with Nuance Rule #6.)
2. Te fnal note of a fgure, period, or phrase is followed by a rest, a breath, or a short pause. Te sonority of this fnal note is lessened unless it is the fnal note of a crescendo passage.
3. A break precedes and follows a group of notes that serves only to fll in the measure after the end of a period or phrase.
4. Tere occurs a break between a note and its repetition. Exceptions are (a) when the two notes represent a feminine ending of a fgure, period, or phrase or (b) when the two notes do not occur in a feminine ending; are not the beginning of a fgure, period, or phrase; or do not represent the fnal note of one and the beginning note of another of two fgures or of two consecutive periods.
5. When the continuation of a series of conjunct notes or of small intervals follows a large interval (fve or six degrees), it is necessary to

breathe (break) before the second note of that interval. Tis rule applies only in slow passages and not at all at the beginning of a piece.

6. If a series of conjunct notes (or small intervals) ends in a large interval whose two notes constitute a detached feminine ending and are of longer value than the preceding notes, one must breathe after the last note of the large interval.
7. When a melodic or rhythmic group of notes forming a pick-up (anacrusis) recurs in a melody, it is necessary to precede it with a break.
8. When a series of notes of a certain value ends on a note of much greater value, break after this last note or after the note of lesser value that follows it (corresponding to a feminine syllable).
9. Break after the frst note, or beat, of a measure if the following note constitutes a wide melodic skip.
10. Make a slight break between several groups of two notes when the frst note is longer than the second.
11. With few exceptions, take a breath after the note of a phrase that has the feeling of repose (tonic) or semirepose (dominant, or even subdominant).
12. Break after the frst note that follows a run or a gruppetto (equal note values) if it is of longer value than those that compose the preceding group.
13. Break between each repetition of a two-note group where the frst note of the pair is of shorter value than the second.
14. Break before and after a group of notes whose role is to fll in an incomplete measure by an imitation, an echo, or a transitional run.

Rules of Accentuation

1. Accent strongly the last note of a measure if it is tied over to the frst beat of the following measure.
2. Accent the frst note of a group that falls on a weak beat when the preceding note takes up a beat throughout the measure.
3. Accent a note preceded and followed by a rest, even if it falls on a weak beat.
4. Accent more strongly the frst note of a measure if it is the same as the last note of the previous measure.
5. Accent strongly, even on a weak beat, the highest note of a descending rhythmic group.

6. A neighboring tone or appoggiatura is slightly accented, even on a weak beat, if it is afected by an accidental. Te accent is stronger if the altered tone is the upper neighbor.
7. An altered note introducing a modulation is accented even if it is on a weak beat.

NOTES

INTRODUCTION

1. In the feld of music theory, much has been written about the body's role in abstract musical understanding, but very little about how to use the body as a tool for musical training, with the exception of Alexandra Pierce's extensive work on engaging the moving body to enhance expressive performance. Robert Hatten also makes a brief but supportive reference to using the moving body in his book, Interpreting Musical Gestures, Topics, and Tropes (Bloomington: Indiana University Press, 2004)—see the section titled "Embodying Sound: Te Role of Movement in Interpretation," 126–32—as does Michael Spitzer in his book, Metaphor and Musical Tought (Chicago: University of Chicago Press, 2004)—see the section titled "Performing Gestures," 88–91. Roger Graybill makes one of the most compelling cases for incorporating the moving body into the aural skills classroom in his excellent 1990 article, "Towards a Pedagogy of Gestural Rhythm," Journal of Music Teory Pedagogy 4 no.1 (1990): 1–50, as does the author in her article, "Beyond Words: Te Moving Body as a Tool for Musical Understanding," Music Teory Online, 2004. It is important to note that most, if not all, of the aforementioned authors have had some experience with Dalcroze eurhythmics.
2. I encourage college-level practitioners and students who are interested in having a personal experience with Dalcroze eurhythmics to participate in one of the many workshops ofered in the United States and abroad. It cannot be overstated that to fully understand the approach, a personal experience with eurhythmics is essential.
3. M. E. Sadler, Te Eurhythmics of Jaques-Dalcroze (Boston: Small, Maynard & Company, 1918), 14–17.
4. Emile Jaques-Dalcroze, Rhythm, Music, and Education, trans. Harold F. Rubenstein (New York: G. P. Putnam's Sons, 1921, repr. London: Te Dalcroze Society, 1980), 63.
5. Diane Urista, "Beyond Words: Te Moving Body as a Tool for Musical Understanding," Music Teory Online 9 (2003): 2.5.
6. Sadler, Te Eurhythmics of Jaques-Dalcroze, 9–11.
7. Robert M. Abramson, "Te Approaches of Emile Jaques-Dalcroze," in Teaching Music in the Twentieth Century (Englewood Clifs, NJ: Prentice Hall, 1986), 31.
8. Julia Schnebly-Black and Stephen F. Moore, Te Rhythm Inside: Connecting Body, Mind, and Spirit through Music (Portland, OR: Rudra Press, 1997), xv.

9. It is important to point out that this text addresses vocal and movement improvisation, but not keyboard improvisation, another key component of the Dalcroze method.
10. As Dalcroze eurhythmics practitioner Timothy Caldwell puts it, "A eurhythmics teacher endeavors to train the mind that perceives the music, the ear that hears it, and the body that performs it.... When all these components are 'in balance' eurhythmics happens." See Timothy Caldwell, Expressive Singing: Dalcroze Eurhythmics for Voice (Saddle River, NJ: Prentice Hall, 1995), 19–21.
11. Jaques- Dalcroze, Rhythm, Music, and Education, 60.
12. Abramson, "Te Approaches of Emile Jaques-Dalcroze," 33.
13. Elizabeth Waterman, Te Rhythm Book (New York: A. S. Barnes and Co., 1936), 8.
14. Schnebly-Black and Moore, Te Rhythm Inside, 43– 44.
15. Te defnition of the kinesthetic sense is derived in part from the Online Medical Dictionary, http:// medical- dictionary.thefreedictionary.com/ kinesthetic +sense. Te term is used as it pertains to the intermodal relationship between physical and musical domains of experience. "Kinesthesia" is a complex and multifaceted word often used interchangeably and inconsistently with the term "proprioception."
16. David Lidov, "Mind and Body in Music," Semiotica 66, no. 1 (1987): 69–70.
17. Ruth Alperson, "A Qualitative Study of Dalcroze Eurhythmics Classes for Adults" (PhD diss., New York University, 1995), 17, quote from Roger Sessions, Te Musical Experience of Composer, Performer, Listener (Princeton, NJ: Princeton University Press, 1950), 19. Interestingly, Roger Sessions was hired to teach theory, history, and music appreciation at the Cleveland Institute of Music in 1921, the same year Jean Binet was hired to teach eurhythmics at the institute, which has a long-standing tradition with the approach. For an informative historical overview of the eurhythmics program at the Cleveland Institute of Music, see Arthur Francis Becknell, "A History of the Development of Dalcroze Eurhythmics in the United States and Its Infuences on the Public School Program" (PhD diss., University of Michigan, 1970), 52–65.
18. Most notably, Roger Graybill and Robert Hatten are two of several music theorists whose analytical work synthesizes the relationship between musical structure and expressive performance.
19. William Schuman, Te Juilliard Report (New York, 1953), Introduction, published during his presidency, in Dorothy Payne, "Striking the Right Chord," Journal of Music Teory Pedagogy 20 (2006): 145.
20. Alperson, "A Qualitative study of Dalcroze Eurhythmics Classes for Adults," 253.
21. Jaques- Dalcroze, Rhythm, Music, and Education, 63.
22. Jaques- Dalcroze, Rhythm, Music, and Education, 67.
23. Marja-Leena Juntunen and Leena Hyvönen, "Embodiment in Musical Knowing: How Body Movement Facilitates Learning within Dalcroze Eurhythmics," British Journal of Music Education 21, no. 02 (2004): 199–214.
24. Jaques- Dalcroze, Rhythm, Music & Education, 63. Recent research from McGill University also supports the importance of motor learning, noting that humans remember music better when they have performed rather than only heard it. See http:// bioengineer.org/ how- the- brain- recognizes- familiar- music (March 7, 2015), accessed May 28, 2015.
25. Abramson, "Te Approaches of Emile Jaques-Dalcroze," 36.
26. Becknell, "A History of the Development of Dalcroze Eurhythmics in the United States and Its Infuences on the Public School Program," (PhD diss., University

of Michigan, 1970), 23–24. Dalcroze's approach is in line with the sound-before-sight approach advocated by several recent music theory pedagogues. See, in particular, Elizabeth West Marvin, "Absolute Pitch Perception and the Pedagogy of Relative Pitch," Journal of Music Teory Pedagogy 21 (2007): 19, and Edwin Gordon, Learning Sequences in Music (Chicago: GIA Publications, 1993), 101. Eye-bound methods are useful for developing sight-singing skills, but often at the expense of the ear's development. Te musician's ear, given its heavy reliance on the eye, needs to be forced open independently from the eye, which is critical for fostering aural autonomy and confdence.

27. Schnebly-Black and Moore, Te Rhythm Inside, 44.
28. Alperson, "A Qualitative study of Dalcroze Eurhythmics Classes for Adults," 36.
29. Caldwell, Expressive Singing: Dalcroze Eurhythmics for Voice, 118.
30. Alperson, "A Qualitative study of Dalcroze Eurhythmics Classes for Adults," 245– 46.
31. Alperson, "A Qualitative study of Dalcroze Eurhythmics Classes for Adults," 10. Te embodied approach proposed here in many respects echoes the position many "radical relativist" meta-theorists have taken toward music analysis since the late 1960s, including Benjamin Boretz, Joseph Dubiel, Marion Guck, Dora Hanninen, and David Lewin, all of whom believe music analysis ought to be a personal, ontological endeavor versus an authoritative, prescriptive one. Moving to music provides a form of analysis that encourages, in Boretz's words, a "self-directed sensitization and strength in the service not only of creating our own experience, but of making it more real, making it more substantial, and more particular and specifc for ourselves." Benjamin Boretz, "Experiences with No Names," Perspectives of New Music 30, no. 1 (1992): 339. As Boretz acknowledges, "Creative interaction with one's own musical experience is a radically different kind of theorizing, trading in authoritative prescription for imaginative re-creation, recognizing the musical in music by leaving it normatively uninvaded." Benjamin Boretz, "Tinking about Teory, Teories, and the 'Musical' in Music," Integral 14–15 (2000–01), 67. I am grateful to Zachary Bernstein for bringing these ideas to my attention in his 2013 review of Dora Hanninen's book A Teory of Music Analysis: On Segmentation and Associative Organization, Eastman Studies in Music (Rochester, NY: University of Rochester Press, 2012), in Music Teory Online 19, no. 4 (2013), 15-18.
32. Joshua Leeds, Te Power of Sound (Rochester, VT: Healing Arts Press, 2001). In particular, see Leeds's discussion on the connections between the ear and body via the vagus nerve, 31–32.
33. Bonnie Bainbridge Cohen, Sensing, Feeling, Action (Northampton, MA: Contact Editions 1993), 114–15.
34. Jessica Phillips-Silver, Laurel J. Trainor, Xiaqing Gao, Jing-jiang Lei, Karen Lehtovaara, and Laurence R. Harris, "Te Primal Role of the Vestibular System in Determining Musical Rhythm," and Jessica Phillips-Silver and Laurel J. Trainor, "Hearing What the Body Feels: Auditory Encoding of Rhythmic Movement" and "Vestibular Infuence on Auditory Metrical Interpretation," in Cortex 45, no. 1 (January 2009), special issue on "Te Rhythmic Brain."
35. Marja-Leena Juntunen, "Embodiment in Dalcroze Eurhythmics" (PhD diss., University of Oulu, 2004).
36. Tomas Clifton, Music as Heard: A Study in Applied Phenomenology (New Haven, CT: Yale University Press, 1983), 34.
37. Interpreting musical sounds as imbued with traces of embodied motion is similar to William Echard's notion of immanence, in which he suggests that

the property of movement "seems localized within the sounds themselves," 83. Deniz Peter's work also notes the phenomenon of experiencing musical sounds as felt shape in his paper "Letting the Body Decide" (paper presented at the 1. CMPCP Performance Studies Network International Conference, Faculty of Music, University of Cambridge, July 15, 2011), as does Ian Cross, who discusses the listening process as an active, dynamic, and interactive process in his article, "Listening as Covert Performance," Journal of the Royal Musical Association 134, Special Issue 1 (2010): 67–77.

CHAPTER 1

1. Robert Abramson, "Te Approaches of Emile Jaques-Dalcroze," 43.
2. Robert Abramson and Joseph Reiser, Music as a Second Language (New York: Movement and Music Press, 1994), 78.
3. Asterisks represent a scale of difculty based on two criteria: the underlying concept of the exercise and its physical/mental demands.
4. Example 1.1 illustrates an approach for teaching a beginning rhythm in a level 1 aural skills class (see Chapter 3, Section 4: Subdivision); Example 1.2 can be introduced after students have learned to sing scales fuently in a level 1 or 2 aural skills class. Quick-reaction exercises are efective to use at any level in the aural skills curriculum.
5. To convert this exercise into an in-place activity, ask students to clap, tap, or intone the rhythm rather than step it. Many subsequent "needs space" exercises in this chapter can be converted accordingly.
6. Abramson and Reiser, Music as a Second Language, 104. To demonstrate the dynamics of this law, ask students to step the rhythm: quarter–quarter–two-eighths–two-eighths and stop. Students usually lose their balance when trying to stop because of the energy accumulated from the faster notes. See Chapter 3, Preparatory Exercise 3.4.2: Stepping Eighths—Lift and Agogic.
7. Jaques- Dalcroze, Les Gammes et les Tonalités, le Phrasé, et les Naunces, Vol. 1 (Lausanne: Jobin et Cie, 1906), 22. Dalcroze espouses applying this rule to the singing of scales in his teaching manuals. Some may consider this rule oversimplistic; however, I would argue there is a correspondence between getting higher and getting louder that seems natural to us based on our physiology. Te broader purpose for applying this "rule," as with others, is to get students to think and feel about the scale in terms of a dynamic entity. Tere are, of course, exceptions to this rule that will be discussed later. For an excellent discussion on the dynamic qualities inherent in the major scale, see Victor Zuckerkandl, Sound and Symbol (Princeton, NJ: Princeton University Press, 1956), 95– 104.
8. Te reason I use the cues "hip" to signal faster and higher and "hop" to signal slower and lower is because of the correspondence between the phonetic qualities associated with the words "hip" and "hop" and their associated musical actions. Phonetically, the word "hip" is placed higher in the palette and spoken faster than the word "hop." Tus, a sensory correlation exists at the precognitive level between the phonetic make-up of these words and the musical actions they elicit. Music theorist Robert Hatten refers to this type of analogous-based association between two opposing modes of experience as a "structural iconism."
9. See Julia Schnebly-Black and Stephen Moore, Te Rhythm Inside: Connecting Body, Mind and Spirit through Music, 49.
10. Jack R. Stevenson, Jaques- Dalcroze Education (Unpublished document).

11. In addition to teaching rests, this is also an efective introductory exercise to use at the beginning of the semester in a level 1 aural skills class to get students comfortable moving through space and reacting to cues. See Chapter 3, Exercise 3.5.1: Stop and Go for variations that increase this exercise's level of difculty.
12. Abramson and Reiser, Music as a Second Language, 61–68.
13. Interference exercises are good activities for opening a class and can be used at any level in the aural skills curriculum. Te exercise presented here provides an efective warm-up for teaching modulation and promotes a vital aspect of musicianship: the ability to retain one's tonal bearing no matter how "distant" one travels.
14. Tis is also a good warm-up exercise for a level 1 aural skills class that eases inhibitions and promotes social interaction.
15. Te arrows denote gestures that move to and/or from focal points at various hierarchical levels. Te highest level is indicated above the staf, respectively to the highpoint B-fat in each phrase (see Chapter 3, Section 8: Gestural Rhythmic Patterns). Te arrows are suggestions that can be modifed or ignored. More arrows could be added at a lower level; for example, in measure four, arrows could lead to and from the agogic Es.
16. As Graybill astutely points out, sometimes the greatest intensity occurs during the focal point's tenure, that is, after its moment of attack.
17. Emile Jaques-Dalcroze, Rhythm, Music, and Education, 128–29.
18. Jaques-Dalcroze, Rhythm, Music, and Education, 73.

CHAPTER 2

1. Tis exercise is from a Dalcroze eurhythmics workshop held at Carnegie Mellon, summer 2003.
2. I am indebted to Dalcroze eurhythmics practitioner Stephen Moore for this exercise.
3. Timothy Caldwell, Expressive Singing: Dalcroze Eurhythmics for Voice, 48.
4. Tis warm-up is from a workshop facilitated by Dalcroze eurhythmics practitioner Robert Abramson held at Te Juilliard School, 1996.
5. Westney, Te Perfect Wrong Note: Learning to Trust Your Musical Self (Pompton Plains, NJ: Amadeus Press, 2003), 194–95; Caldwell, Expressive Singing, 51–52. Also see David Frego's video, Creating Artistry through Movement: Dalcroze Eurhythmics in the Choral Setting (Hal Leonard, 2005), in which four types of mirroring are identifed and demonstrated.
6. Robert Abramson, "Te Approaches of Emile Jaques-Dalcroze," 121; Ruth Alperson, "A Qualitative study of Dalcroze Eurhythmics Classes for Adults," 23–24.
7. Caldwell, Expressive Singing, 40.
8. See Christian Keysers' studies on mirror neurons and kinesthetic empathy, which recognize that seeing someone else's movement is the same as experiencing the movement yourself, in his book Te Empathic Brain: How the Discovery of Mirror Neurons Changes Our Understanding of Human Nature (Copyright 2011 Christian Keysers), 122–35. Or as Keysers puts it, "I can feel you move," 134.
9. Caldwell, Expressive Singing, 29.
10. In addition to the warm-up exercises presented here, we highly recommend Timothy Caldwell's introductory studies on time, space, energy, weight, balance, and plasticity. In particular, see pp. 23–29 and pp. 40–42 in his book,

Expressive Singing. These experiential studies are particularly useful in a eurhythmics course for developing kinesthetic awareness and exploring the interrelationship between time + space + energy + weight + balance + plasticity in physical and musical domains. We also recommend Pauline Oliveros's inventive Sonic Meditations (Baltimore, MD: Smith Publication, 1974) and Deep Listening: A Composer's Sound Practice (Lincoln, NE: iuniverse, 2005), and, for a calming class closer, Schnebly-Black and Moore's meditation exercise, found in their book, The Rhythm Inside, pp. 117–19.

CHAPTER 3

1. Diane J. Urista, "Beyond Words, The Moving Body as a Tool for Musical Understanding," 4.4.
2. Graybill, "Towards a Pedagogy of Gestural Rhythm," 1.
3. Abramson and Reiser, Music as a Second Language, 17.
4. Dalcroze's concept of beat does not conflict, but rather complements other more abstract representations, such as Lehrdahl and Jackendof's familiar beat as geometrical dot. More specifically, Lehrdahl and Jackendof define beat as a hypothetical idealization without duration, and the duration between beats as a time-span. Their representation is useful for determining the precise timing of beats within a metrical grid, whereas Dalcroze's tripartite representation highlights the qualitative aspects of beat as a performed/perceived musical event. In sum, geometrical dots represent time points, whereas the tripartite beat represents varieties of gestural flow. For an in-depth discussion on the advantages of Lerdahl and Jackendof's concept of beat, see Generalized Theory of Tonal Music (Cambridge, MA: MIT Press, 1983), in particular, pp. 18–20.
5. Again, Dalcroze's dynamic conception of meter does not conflict, but rather complements more standardized notions of meter, such as Lehrdahl and Jackendof's familiar dot notation. Whereas dot notation is useful for measuring the rhythmic periodicity and hierarchical depth of metrical beats, Dalcroze's representation assigns gestural functions to metrical beats and reveals varieties of motion to, through, and from metrical beats as a performed/perceived musical event. For other dynamic representations of meter akin to Dalcroze's, see Wallace Berry's conception of meter as impulses in his book, Structural Functions in Music (New York: Dover Publications, 1976), 319–419; Christopher Hasty's in-depth study of meter as projective process in Meter as Rhythm (New York: Oxford University Press, 1997), 67–147; Steve Larson's meter as musical forces in his book, Musical Forces, Motion, Metaphor, and Meaning in Music (Bloomington: Indiana Press, 2012), 136–79; London's cyclical metric representations in Hearing in Time, 64–78; 100–102; 132–41; and Victor Zuckerkandl's cyclical phases and metric waves in his book, Sound and Symbol: Music and the External World, trans. William R. Trask (New York: Partheon Books, 1956, 1973), 169–200. Also see Edward W. Large and Caroline Palmer's empirical studies on the perception of meter as self-sustained oscillations in their article, "Perceiving Temporal Regularity in Music," Cognitive Science 26 (2002): 1–37.
6. Jaques-Dalcroze, Rhythm, Music, and Education, 70.
7. For an informative discussion on Lussy's theory, see Mine Dogantan's article, "Mathis Lussy: A Pioneer in Studies in Expressive Performance," Music Perception: An Interdisciplinary Journal 21, no. 1 (Fall 2003): 129–35.
8. Abramson and Reiser, Music as a Second Language, 103.

9. Te term "focal point" is adopted from Graybill, "Towards a Pedagogy of Gestural Rhythm."
10. Lerdahl and Jackendof, A Generative Teory of Tonal Music, 17.
11. Lerdahl and Jackendof, A Generative Teory of Tonal Music, 17.
12. London, Hearing in Time, 17.
13. Richard Hofman, William Pelto, and John W. White, "Takadimi: A Beat-Oriented System of Rhythm Pedagogy," Journal of Music Teory Pedagogy 10 (1996): 7–30.
14. Dalcroze recognized the strong correlation between verbal prosody and musical rhythms, and recommended, "Te pupil should also learn to combine automatisms of his limbs with those of speech and song. Te laws governing the natural rhythmicisation of verbal rhythms are similar to those relating to the balance of sound rhythms, whether vocal or instrumental," in Rhythm, Music, and Education, 68.
15. Jaques- Dalcroze, Rhythm, Music, and Education, 38. Also see Bachman's informative discussion on the virtues of walking rhythms inDalcroze Today: An Education Trough and Into Music, trans. David Parlett, ed. Ruth Stewart (New York: Oxford University Press 1991), 176–80.
16. Abramson, "Te Approaches of Emile Jaques-Dalcroze," 38–39, 41.
17. Graybill, "Towards a Pedagogy of Gestural Rhythm," 7.
18. Abramson and Reiser, Music as a Second Language, 17–19. Tese exercises in plasticity are derived from a Dalcroze eurhythmics workshop facilitated by the late Robert Abramson in 1986. Tey are particularly useful for a eurhythmics course or for a course devoted primarily to rhythm and movement.
19. Martha Davis, "Efort-Shape Analysis of Movement: An Evaluation of Its Logic and Consistency and Its Systematic Use in Research," in Four Adaptions of Efort Teory in Research and Teaching, by Irmgard Bartenief, Martha Davis, and Forrestine Paulay (New York: Dance Notation Bureau, 1970), 31.
20. See Exercises 2: Laban Efort Actions in Julie Schnebly-Black and Stephen F. Moore, Te Rhythm Inside, 120–21.
21. To develop "good relative click," Lewis suggests using the metronome marking of a familiar piece as a reference from which you can double or divide by half see his book, Rhythm: What It Is and How to Improve Your Sense of It (San Francisco: Rhythm Source Press, 2005), 51.
22. Hatten, Interpreting Musical Gestures, Topics, and Tropes, 108–9. Also see Larson's discussion on the mapping of physical gravity and gesture onto metrical down- and upbeats and other musical events in Musical Forces, Motion, Metaphor, and Meaning in Music, 148–49.
23. For a more in-depth study on the anacrusis, see Steinitz's essay, in which she distinguishes between diferent types of anacruses and their function, such as the "motor," the "pathetic or arrestive," the "indispensable," the "accelerative," and the "lengthened" anacrusis," in Teaching Music in Rhythmic Lessons: Teory and Practice of the Dalcroze Method, ed. Raf and Bruno Reinhardt (Tel-Aviv: Or-Tav Music Publications, 1988), 51–54. Also see Mathis Lussy's various categories of anacruses and their relationship to life rhythms such as respiration in Musical Expression, Accents, Nuances, and Tempo in Vocal and Instrumental Music (London: Novello & Co., 1895), 6–7.
24. Te terms "normative measure" and "normative metric fow" are adopted from Abramson and Reiser,Music as a Second Languageand Caldwell,Expressive Singing. Distinct musical styles can also alter the neutrality of a normative measure.

For instance, some crusic beats rebound immediately from gravity, making the initial crusis feel anacrusic, as in the characteristic Eastern European "lifted crusis," or "oops beat."

25. Tis version of cycle clapping is based on ideas adopted from Abramson and Reiser, Music as a Second Language, 28, and Caldwell, Expressive Singing, 25– 26.
26. Caldwell, Expressive Singing, 35. Diferent musical styles and contexts will elicit subtle adjustments to this pattern, prompting other, more appropriate words of description.
27. For a more detailed account on stepping rhythms, see Jaques-Dalcroze's Rhythmic Movement, Vol. 1: Five Lengths of Step and Analysis of Movements in Walking (London: Novello and Co., 1920), 12–15.
28. Graybill, "Towards a Pedagogy of Gestural Rhythm," 18, 30.
29. Also see Dalcroze's full-body conducting patterns for accompanying in duple, triple, quadruple, and quintuple time in Rhythmic Movement, Vol. 1, 24, 31, 43, 57. In addition, he details changes in carriage, fve lengths of step, the infuence of breath on movement, exercises for independence of limbs, and diferent ways of springing.
30. Jaques- Dalcroze, Rhythm, Music, and Education, 43– 44, 70.
31. Abramson and Resiser, Music as a Second Language, 275– 76.
32. As percussionist and pedagogue Andrew Lewis points out in his book, Rhythm: What It Is and How to Improve Your Sense of It, "I fnd the strongest place to imagine and feel the inner pulse is in the center of the chest, which is often considered the feeling center of the body. Te more work you do there, the more tangibly you'll feel the pulse—feel not just in the physical sense but also in the emotional. Te more you're connected with the pulse, the more of an emotional experience it becomes. Desire, musical expression, and pulse all get mixed together in the center of the chest," Book 2, 3.
33. I am thankful to Marshall Grifth, Anthony Slusser, and Nadia Tarnawsky from the Cleveland Institute of Music (CIM) for introducing swing patterns to me. To the best of my knowledge, they are unique to the eurhythmics program at CIM.
34. Graybill, "Towards a Pedagogy of Gestural Rhythm," 14.
35. Abramson and Reiser, Music as a Second Language, 103.
36. Abramson and Reiser, Music as a Second Language, 245.
37. It is interesting to note that the "lift," also known as the "fight phase," is empirically documented in the kinematic analysis of human walking and running cycles. As London explains, "When walking one foot is on the ground at all times, and at some points in the walking cycle, both feet are on the ground. In a run, however, at some points in the gait cycle, both feet are in the air (the 'fight phase' or the gait cycle in a run)," "Musical Rhythm: Motion, Pace, and Gesture Music and Gesture," in Music and Gesture, ed. Anthony Gritten and Elaine King, (Burlington, VT: Ashgate Publishing, 2006), 129. Tis idea came from Graybill, "Towards a Pedagogy of Gestural Rhythm," 30.
38. Abramson and Reiser, Music as a Second Language, 105.
39. Tese nuanced rhythms were inspired by Graybill, Abramson, and Reiser.
40. Abramson and Reiser, Music as a Second Language, 101. Tis dynamic withholding efect is similar to Hatten's more nuanced "lift metaphor." For an in-depth analysis, see his Interpreting Musical Gestures, Topics, and Tropes, 157–62.
41. Abramson and Reiser, Music as a Second Language, 101.
42. Frank Samarotto, "Strange Dimensions: Regularity and Irregularity in Deep Levels of Rhythmic Reductions," in Schenker Studies 2, ed. Carl Schachter and Heidi Siegel (Cambridge: Cambridge University Press, 1999), 235.

43. Teorists have devised many terms for defning the conficts that arise with established metric patterns. London refers to this phenomenon as "metric malleability": "Te property that many melodic or rhythmic patterns may be heard in more than one metric context," Hearing in Time, 79. Another is "metrical dissonance": see Harald Krebs, "Some Extensions of the Concepts of Metrical Consonance and Dissonance," Journal of Music Teory 31, no. 1 (1987): 99–120.
44. For important theoretical studies addressing metric-rhythmic interactions, see, in particular, London, Hearing in Time; Hasty, Meter as Rhythm; Rothstein, Phrase Rhythm in Tonal Music (New York: Schirmer Books, 1989); Krebs, "Some Extensions of the Concept of Metrical Consonance and Dissonance," 99–120; and Lerdahl and Jackendof, A Generative Teory of Tonal Music.
45. Tese nuanced compound rhythms were inspired by Graybill, "Towards a Pedagogy of Gestural Rhythm."
46. Abramson and Reiser, Music as a Second Language, 43.
47. Abramson and Reiser, Music as a Second Language; Abramson, "Te Approaches of Emile Jaques-Dalcroze," 61.
48. Bear in mind that the normative profles suggested here for quarter rests are not ironclad. Other musical variables, such as pitch, phrasing, and dynamics, can contribute to the gestural interpretation of rests.
49. Tis exercise is from Graybill, "Towards a Pedagogy of Gestural Rhythm," 29-30.
50. Tis is an abridged version of a more extensive procedure outlined in Abramson and Reiser, Music as a Second Language, 44– 45.
51. For a more in-depth analysis on the interpretation of silence, see Tony Steinitz's informative essay in her book, Teaching Music in Rhythmic Lessons, which addresses several types of rests and pauses according to function, such as (1) the pause, as a means of separation to mentally prepare the listener for an upcoming contrast in sound; (2) the long rest, to produce surprise or a heightened level of suspense for what's to come; (3) the long pause, as a means to increase tension; (4) pauses to produce rallentando and/ or diminuendo afects; (5) the momentary pause, logical and/or aesthetic, that allows the performer to "take a breath" before moving on, 35–41. Also see Dalcroze's rules of phrasing (in Appendix B) for several examples of melodic momentary pauses.
52. Graybill, "Towards a Pedagogy of Gestural Rhythm," 27.
53. Graybill, "Towards a Pedagogy of Gestural Rhythm," 27.
54. See Rhythmic Movement, Vol. 1, for Dalcroze's more refned six ways of skipping.
55. Historically, the dotted eighth–sixteenth has undergone several stylistic interpretations and bending of note values, for instance, the regal, double-dotted style of the French Overture, in which the dot is doubled and replaced with an interpolated rest and shortened sixteenth, even halved. In contrast, the dotted rhythm also portrays solemnity, as in Bach's St. Matthew Passion, to depict the fagellation of Christ. In this case, the sixteenth note slurs back recessively into the preceding dotted eighth. See Hermann Keller, Phasing and Articulation: A Contribution to a Rhetoric of Music, with 152 Musical Examples (New York: W. W. Norton, 1965), 39, 79, for many other historical interpretations of this highly malleable rhythm.
56. I am grateful to Nadia Tarnawsky for showing me this modifed rendition of the Assemblè for realizing the sixteenth–dotted eighth rhythm.
57. For informative discussions on syncopation from a eurhythmics perspective, see Becknell, "A History of the Development of Dalcroze Eurhythmics in the United States and Its Infuences on the Public School Program," 25; Pennington,

Te Importance of Being Rhythmic: A Study of the Principles of Dalcroze Eurhythmics Applied to General Education and to the Arts of Music, Dancing, and Acting (New York and London: G.P. Putnam's Sons, 1925), 18; Abramson, "Te Approaches of Emile Jaques-Dalcroze," 45; Jaques-Dalcroze, Rhythm, Music, and Education, 69; Bachman, Dalcroze Today: An Education through and into Music; Steinitz, Teaching Music in Rhythmic Lessons, 77–85; and Sadler, Te Eurhythmics of Jaques-Dalcroze. Both types of syncopation create an argument with the normal metric accent.

58. Jaques- Dalcroze, Rhythm, Music, and Education, 69.
59. Pennington, Te Importance of Being Rhythmic, 25.
60. Graybill, "Towards a Pedagogy of Gestural Rhythm," 4.
61. Graybill, "Towards a Pedagogy of Gestural Rhythm," 11.
62. Jaques- Dalcroze, Rhythm, Music, and Education, 69.
63. Westney, Te Perfect Wrong Note: Learning to Trust Your Musical Self, 192.
64. London, Hearing in Time, 294.
65. I am grateful to Marshall Grifth for this accompaniment idea.
66. I am grateful to Nadia Tarnawsky, Anthony Sussler, and Marshall Grifth for introducing me to the meter chart used for teaching eurhythmics at CIM.
67. Abramson, "Te Approaches of Emile Jaques-Dalcroze," 50–51.
68. Tis exercise is from a Dalcroze eurhythmics workshop held at Carnegie Mellon, summer 2002.
69. I am indebted to the late Herb Henke for this exercise.
70. Jaques- Dalcroze, Rhythm, Music, and Education, 44.
71. Jaques- Dalcroze, Rhythm, Music, and Education, 70.

CHAPTER 4

1. Many of Dalcroze's innovative solfège and ear training exercises were devised for his undergraduate students during his tenure as professor of harmony at the Geneva Conservatory (1892–1910). Two extensive solfège manuals were published during this time: Les Gammes et Les Tonalités, Le Phrasé et Les Nuances (Scales and Keys, Phrasing and Nuance, in 3 vols.) (Lausanne: Jobin et Cie, 1906), and Solfège Rythmique (Rhythmic Solfège) (Lausanne: Jobin et Cie, 1925). Volume 1 of Les Gammes et Les Tonalités, Le Phrasé et Les Nuances has been translated by the late Robert Abramson (1975, unpublished) and Greg Ristow (Copyright 2007).
2. More specifcally, Dalcroze used a fxed-do system that implemented altered syllables to denote sharps and fats. Sharps are given an "-é" ending, and fats an "-eu" ending. Emile Jaques-Dalcroze, Les Gammes et Les Tonalitiés, Le Phrasé et Les Nuances, Vol. 1, 14. Today, most Dalcroze practitioners use a fxed-do system without altered syllables.
3. I am adopting the term "functional solmization" from Gary Karpinski, Aural Skills Acquisition: Te Development of Listening, Reading, and Performing Skills in College- Level Musicians (New York: Oxford University Press, 2000).
4. For an informative discussion on the pros and cons of absolute versus relative singing systems, see Karpinski, Aural Skills Acquisition, 90–91. Also see E.W. Marvin, "Absolute Pitch Perception and the Pedagogy of Relative Pitch," Journal of Music Teory Pedagogy 21 (2007): 17, and Michael Rogers, "Beyond Intervals: Te Teaching of Tonal Hearing," Indiana Teory Review 6, no. 3 (1983): 18– 34.
5. Jaques- Dalcroze, Rhythm, Music, and Education, 30– 31.
6. Te frst rule of nuance subscribes to the natural correlation that exists between pitch height and degrees of intensity as proposed by many recent and historical

theories of embodied musical understanding: ascending pitch corresponds to an increase in intensity; descending pitch corresponds to a decrease in intensity.

7. Dalcroze acknowledges that "Sometimes the character of a piece does not permit a pathetic accent. In this case the crescendo is only executed up to the strong beat (or the strong part of a compound beat) which precedes the highest note; the decrescendo will start on the strong beat (or the strong part of a compound beat)." Jaques- Dalcroze, Les Gammes et Les Tonalitiés, Le Phrasé et Les Nuances, Vol. 1, trans. Ristow, 22.
8. Jaques- Dalcroze, Music, Movement, and Ear Training, 46.
9. Jaques- Dalcroze, Les Gammes et Les Tonalitiés, Le Phrasé et Les Nuances, Vol. 1, 14–15. Dalcroze also recommends singing scales in sextuplets and nonuplets.
10. Jaques- Dalcroze, Les Gammes et les Tonalités, le Phrasé et les Nuances, Vol. 1, 16– 21.
11. Singing scales in contrary motion in diferent rhythms is a common eurhythmics exercise.
12. Abramson and Reiser, Music as a Second Language, 71.
13. Abramson and Reiser, Music as a Second Language, 71–72. You may wish to use other methods, such as Curwen/Kodaly hand signals.
14. Abramson and Reiser, Music as a Second Language, 73– 74.
15. Tis exercise in many respects embodies the three types of musical forces set forth by theorist Steve Larson: (1) gravity—a tone's tendency to descend toward a gravitational base, such as tonic; (2) magnetism—a less stable tone's attraction to more stable tones (which intensifes as the interval to the stable tone becomes smaller); and (3) inertia—the tendency for a pattern of motion to continue in the same way, even past a point of stability. Musical Forces: Motion, Metaphor, and Meaning in Music.
16. Abramson and Reiser, Music as a Second Language, 74– 79.
17. Abramson and Reiser, Music as a Second Language, 76.
18. Tis summary of terms is derived from the following sources: Abramson and Reiser, Music as a Second Language, 75-78; David Huron, Sweet Anticipation: Music and the Psychology of Expectation (Cambridge, MA: MIT Press, 2007), 145; Zuckerkandl, Sound and Symbol, 95– 100.
19. Ideas for these exercises were obtained from workshops facilitated by Abramson and are also found in Music as a Second Language, 83– 90.
20. See Jaques- Dalcroze, Rhythm, Music, and Education, 73.
21. Te term "tonal center" is used in a general sense to include a pitch that functions as "tonic" in a traditional major/minor tonal system, and as a center in musical works that use other collections, such as pentatonic, octatonic, whole tone, and so on.
22. Te idea of tonic retention is often far easier to grasp in theory than in practice. As Marvin and Brinkman point out, "Te abstraction of the tonic pitch [aurally] from a musical surface is a common ability among musicians but one in which errors are made," 45. As Butler points out, "Tonally encultured listeners can recognize the tonal center in an unfamiliar tonal composition almost instantly, and without visible efort," 237–38. For research regarding the limits of long-range tonal retention, see Nicholas Cooke's study, "Te Perception of Large-Scale Tonal Closure," Music Perception 5 (1987): 197–205.
23. As Diana Deutsch points out, the decrement in pitch memory is not simply a matter of limited storage space. She maintains that a specialized system for pitch memory exists. She describes this system as a "lateral inhibitory network," wherein each new pitch introduced inhibits memory of the immediately

preceding pitch. Tis hypothesis ofers a plausible explanation for why students report being "overrun" by too much information during dictation exercises. See Deutsch, "Memory and Attention in Music," in Music and the Brain: Studies in the Neurology of Music (London: William Heinemann Medical Books, 1977).

24. In addition to the retention and recall capabilities outlined here, a type of "absolute pitch" innovative to the Dalcroze method can be developed. Although current research suggests that adults are incapable of acquiring absolute pitch, we would argue that some adults are capable of internalizing a single absolute pitch by its sheer usage as a pitch of reference. In the Dalcroze method, this absolute pitch is C (although concert A could serve as a viable alternative). Many Dalcroze practitioners purport that adult students without absolute pitch—who have diligently studied these exercises (in particular, C-to-C scales introduced in Section 6)—are able to recall C without assistance by the end of one semester. Dalcroze outlines daily exercises children can practice to obtain absolute pitch in *Les Gammes et les Tonalités, le Phrasé et les Nuances*, Vol. 1, trans. Ristow, 6: (1) Te student attempts to establish in his or her mind a relationship and an agreement between the sound of a note and the name of this note. To do this, every day he or she must sing many times each and every note, with his or her eyes closed (to better concentrate) and then announce in a clear voice the name of the note that he or she has just sung. (2) Each morning, upon awakening, the student should attempt to sing C, and then check the intonation with the aid of a tuning fork or a musical instrument. Repeat this exercise as often as possible throughout the day. (3) Whenever the student hears a sound (horn of a tram, vibration of a crystal, etc.), he or she should attempt to determine the height of the sound and to designate the name of the corresponding note. Ten, he or she will check his or her naming with the aid of a tuning fork or instrument. (4) Te student will play on the piano and attempt to hear the harmonics: tuning forks are available that give C, major and minor chords, or chromatic scales. Dalcroze maintained that advanced students trained in his method could identify the key of any piece they hear by its reference to middle C.
25. Te following retention and recall exercises were obtained from workshops facilitated by the late Robert Abramson and from *Music as a Second Language*, 59–60, 62–65, and 66–68.
26. Dalcroze ofers suggestions for attuning students to the sensations of vocal production: "Te student learns to diferentiate vocal sounds from the sensation produced by the varying degrees of tension of the vocal chords, and according to the localization of sound vibrations. His hand, laid on his chest, neck, jaw, nose, or brow, enables him, by means of the diferent forms of resonance of vibrations, to realize the pitch of the notes emitted," "Perception of the Pitch of Sounds Sung by Means of Dynamic Muscular Sense," in Rhythm, Music, and Education, 72–73.
27. Te idea of an "invitation to tonic" came from Abramson.
28. For recalling exercises, Dalcroze practitioner Anabelle Joseph has students sing in rhythm the phrase "Tis-is-the-sound-of-C" while patsching their thighs, which serves as an efective rhythmic/kinesthetic mnemonic device for internalizing C.
29. Abramson and Reiser, *Music as a Second Language*, 68.
30. As Karpinski points out, "Te act of singing down from any pitch within a given diatonic collection is useful in guiding listeners to the tonic of a musical passage," Aural Skills Acquisition, 47. Several other theoretical accounts also

recognize the phenomenon of a descent to produce closure. See Larson, 1997, and Schenker, 1935.

31. See Karpinski's summary of recent research on absolute pitch in Aural Skills Acquisition, 58–61. Also see J. Kent Williams's discussion in Journal of Music Teory Pedagogy 12 (1998): 99.
32. Tis exercise was obtained from a workshop facilitated by Lisa Parker and Anne Farber at the Longy School of Music.
33. I modifed Dalcroze's version by converting his Roman numerals to more conventional Arabic numbers to denote scale degrees, and by replacing his stafed single-lined notes with percussion notation to denote rhythm. See all three volumes of his Les Gammes et les Tonalités, le Phrasé et les Nuances for other melodies to decipher in all keys.
34. From Deborah Rifkin and Diane Urista, "Developing Aural Skills: It's Not Just a Game," Journal of Music Teory Pedagogy 20 (2006): 57–78. Tis exercise is actually based on a compilation of ideas from several sources, in particular, Bruce Arnold's Complete One Note Method (New York: Muse-Eek Publishing, 1995) and from observing the teaching of Klaus Sinfelt and Stephan Eckart at New York University.
35. Dalcroze devotes the second and third volumes of his Les Gammes et Les Tonalitiés, Le Phrasé et Les Nuances to the study of scalar fragments. Many fragment exercises are drawn from Ristow, Tomsen, and Urista's article, "Dalcroze's Approach to Sofège and Ear Training for the Undergraduate Aural Skills Curriculum," Journal of Music Teory Pedagogy 28 (2014): 121–160 and from Abramson and Reiser, Music as a Second Language.
36. Hexachords and heptachords are addressed in Chapter 5. For additional exercises using pentachords and larger fragments (i.e., hexachords and heptachords), see Spector, Rhythm and Life; Jaques- Dalcroze, Les Gammes et les Tonalités, le Phrasé et les Nuances, Vol. 3; and Abramson and Reiser, Music as a Second Language.
37. I am indebted to Dalcroze eurhythmics practitioner Gabriella Chrisman for this exercise. Dalcroze stresses fuency with half and whole steps as a critical frst step for developing the ear. He explains, "Te frst concern of the teacher must be to make the child appreciate the diference that exists between the whole tone and the semi tone. If the student grasps this diference only with hesitation, whether in singing or listening, there should be no thought of continuing to another subject," Jaques-Dalcroze, Les Gammes et Les Tonalitiés, Le Phrasé et Les Nuances, trans. Greg Ristow, 1.
38. Sequences such as this one serve as good warm-ups and are excellent for fostering solfège acquisition. Increase the tempo incrementally to develop verbal fuency.
39. Dalcroze presents numerous coded melodies in all three volumes of Les Gammes et les Tonalités, le Phrasé et les Nuances that use scalar fragments of all sizes.
40. Ideas for trichord-dichord scales and melodies are derived from Abramson and Reiser, Music as a Second Language, 170.
41. Abramson and Reiser, Music as a Second Language, 189–91. Karpinski cites Zuckerkandl to make the case for functional hearing based on one's perception of Beethoven's Op. 110 fugue subject. As Zuckerkandl explains: "… a man who hears [this] merely as three equal steps, three gradually ascending fourths, and fails to hear how the same acoustical interval takes on a new meaning as is ascend from 1 - 4 through 2 - 5 to 3 - 6 . . . such a man does not hear music," Man the Musician, trans. Norbert Guterman (Princeton, NJ: Princeton University Press, 1973), 114.

42. For other pentachord exercises and etudes, see Jacque-Dalcroze, *Les Gammes et les Tonalités, le Phrasé et les Nuances*, Vol. 2, 104–10, and Abramson and Reiser, *Music as a Second Language*, 228–243.
43. From Ristow, Tomsen, and Urista, "Dalcroze's Approach to Sofège and Ear Training for the Undergraduate Aural Skills Curriculum." For an informative discussion on the merits of a context-based approach to teaching intervals, see Karpinski, 52–56, who draws on many strands of research in support of this approach. Karpinski references Jersild, who railed against "music reading systems that begin with a more or less abstract study of intervals. Tese rarely provide efcient results. Tere are two reasons for this. First, the character of the interval changes according to its place in the tonal context. Second, the interval constitutes a subordinated detail in any musical sequence," 1966, 166.
44. Tis exercise came from workshops facilitated by Lisa Parker and Anne Farber at the Longy School and from workshops by Abramson.
45. I would like to thank Kathy Tomsen for Variations B and C.
46. Hexachords and sixths, and heptachords and sevenths are addressed in Chapter 5: Harmony.
47. Te next set of variations is derived from Abramson and Reiser, *Music as a Second Language*, 166–67.
48. Jaques-Dalcroze, *Music Movement and Ear-Training: Games and Exercises*, trans. Dalcroze School, London (Switzerland: Charles Huguenin, 1939), 1–2.
49. Dalcroze devotes *Les Gammes et les Tonalités, le Phrasé et les Nuances*, Vol. 1 to C-to-C scales.
50. From Jaques-Dalcroze, *Les Gammes et les Tonalités, le Phrasé et les Nuances*, Vol. 1.
51. Te ideas presented in this section are from Ristow, Tomsen, and Urista, "Dalcroze's Approach to Sofège and Ear Training for the Undergraduate Aural Skills Curriculum."
52. Many Dalcroze practitioners prefer starting with F major rather than G major, citing that the opening whole-step pattern C–D–E–F♯ is more challenging to grasp in the initial stages than the lowering of B to B♭.
53. If using letter names, ask students to withhold singing accidentals at frst until everyone has had a chance to fgure them out. To sing accidentals in rhythm, consider the following one-syllable modifcations: for sharps—Efsh, Ceesh, Geesh, Deesh, and so on; for fats—Beef, Eef, Aef, Deef, and so on. Compared to systems that specifcally identify function, fxed-do and letter names (without accidentals) intentionally withhold function, forcing the ear to determine how C and other tones are functioning on their own. As mentioned, this is why C-to-C scales are an especially efective exercise for developing sensitivity to scale degree function for students with absolute pitch.
54. For this reason, C-to-C scales also serve as an efective complement to verbal explanations for teaching tonality in the theory classroom. Tis approach aligns well with other dynamic theoretical conceptions of tonality. In particular, see Michael Rogers, *Teaching Approaches in Music Teory* (Carbondale: Southern Illinois University Press, 2004), and "Review of 'To Doh or Not to Doh,'" *Journal of Music Teory Pedagogy* 14 (2000): 15–25. Also see Hatten's conception of the tonal system as a virtual environment in *Interpreting Musical Gestures, Topics, and Tropes*; Larson's theory of musical forces in *Musical Forces: Motion, Metaphor, and Meaning in Music*; and Zuckerkandl's dynamic conception of the scale in *Sound and Symbol*, 11–31.

55. It is interesting to note that Dalcroze suggests that all major scales should be learned frst, before introducing minor scales. In his manuals, all major scales are presented through the sharp side of the circle of ffths, followed by the fat side; minor scales are presented afterward. When introducing new scales, Dalcroze spends a lot of time comparing each new scale to the one previously learned through a series of singing, ear training, and improvisatory exercises before introducing the next scale. For instance, after introducing and comparing G major to C major, he then introduces and compares D major to G major, A major to D major, and so on up the sharp side of the circle of ffths until reaching the fnal key of C♯ major. Te same process is then repeated on the fat side. C major is compared to F major, F major to B♭ major, and so on until the fnal key of C♭ major is reached. Once minor scales are learned, major scales are compared to their parallel minors, and the reverse. See Irwin Spector, Rhythm and Life: Te Work of Emile Jaques-Dalcroze (Stuyvesant, NY: Pendragon Press 1990), 108–9.
56. I am indebted to Greg Ristow for introducing me to this example.
57. I thank Kathy Tomsen, who is indebted to Anne Farber for introducing her to this exercise. Also see Karpinski, Aural Skills Acquisition, in particular, 44–48.
58. See Les Gammes et les Tonalités, le Phrasé et les Nuances, vols. 1–3 for other melodies by Dalcroze.
59. I would like to thank Greg Ristow for this idea and melody, who is indebted to Dalcroze eurhythmics practitioner Anne Farber for this idea; also in Ristow, Tomsen, and Urista, "Dalcroze's Approach to Sofège and Ear Training for the Undergraduate Aural Skills Curriculum."
60. As Ristow points out, "Students who study these C-to-C scales learn to hear function within diferent keys. Te process of converting solfège to scale degrees becomes automatic, so that a Dalcroze student hearing, say, Do in B♭ knows immediately how it feels in the key. Moreover, the experienced Dalcroze student knows how every pitch feels in every key, and knows this [solely] in terms of the note names, without having to think about the scale degrees they occupy. Tis allows students to transfer that knowledge into performance, as they know just how any note they will play will feel, and adjust their playing accordingly," unpublished paper, 12.
61. I am indebted to Greg Ristow for bringing this pedagogical approach by Dalcroze to my attention.
62. As aural skills specialist Gary Karpinski points out, "In order to sing music that modulates, sight singers must be able to execute changes in pitch structure in real time. Te decision to sight sing any given passage by understanding it in terms of modulation must be distinguished from the similar kinds of decisions made for the purposes of academic analysis…. To this end, we will see that some tools used to execute certain passages might be at odds with the kinds of sophisticated, thought-out analyses produced in books and journals and even in well-taught theory classes. Particularly notable is the fact that sight singers who read by tonal function generally make more frequent changes of tonic (and use more fragments of various scales) than one would fnd in any rigorous academic analysis," 199–200.
63. Rifkin and Urista, "Aural Skills: It's Not Just a Game," 66–68.
64. Tis is a modifed version from Spector, Rhythm and Life: Te Work of Emile Jaques-Dalcroze, 10.
65. Rifkin and Urista, "Aural Skills: It's Not Just a Game," 69–70.
66. Karpinski, Aural Skills Acquisition, 200.

67. I am indebted to Kathy Tomsen, who would like to thank Anne Farber for this exercise. Also see Ristow, Tomsen, and Urista, "Dalcroze's Approach to Sofège and Ear Training for the Undergraduate Aural Skills Curriculum."
68. I am indebted to Greg Ristow for this exercise, who would like to thank the late Herb Henke, emeritus professor of music education and eurhythmics at Oberlin, for introducing him to this exercise. For other methods for teaching modulation, see Karpinski, Aural Skills Acquisition, 200–213.
69. Cycle singing is a well-known eurhythmics class technique.
70. Many of the replacements we present are adopted from Robert Abramson. In the workshops he facilitated, he often used "Frère Jacques" as an introductory melody. Simple melodies such as "Frère Jacques" are excellent songs to sing with replacements. Also see Abramson and Reiser, Music as a Second Language, 13–15.
71. Abramson and Reiser, Music as a Second Language, 164.
72. Scalar tethers (fllers) are a well-known Dalcrozian strategy for measuring and singing melodic intervals with accuracy and are in keeping with the notion that intervals are drawn from scalar fragments.
73. Graybill, "Towards a Pedagogy of Gestural Rhythm," 1–50.

CHAPTER 5

1. Tis sequence is a modifed version derived from an online solfège manual by John Robert Stevenson that, to the best of my knowledge, is no longer available.
2. Tis is a modifed version of heptachord species presented by Spector in Rhythm and Life: Te Work of Emile Jaques-Dalcroze, 104. Also see Jaques-Dalcroze's Les Gammes et les Tonalités, le Phrasé et les Nuances, Vol. 2, 168–94, for additional exercises and melodies featuring heptachords.
3. Derived from Abramson and Reiser, Music as a Second Language, 160; Spector, Rhythm and Life: Te Work of Emile Jaques-Dalcroze, 104; and Jaques-Dalcroze, Les Gammes et les Tonalités, le Phrasé et les Nuances, Vol. 3.
4. Derived from Jaques-Dalcroze, Les Gammes et les Tonalités, le Phrasé et les Nuances, Vol. 3, 19–21.
5. I would like to thank Philip Stoecker for this exercise.
6. Spector, Rhythm and Life: Te Work of Emile Jaques-Dalcroze.
7. Only the hexachords that compose the inversions of the dominant seventh chord are introduced; however, in his manuals, Dalcroze fastidiously analyzes the hexachords that compose the inversions of all diatonic seventh chords of the major mode and presents numerous exercises for singing them in Les Gammes et les Tonalités, le Phrasé et les Nuances, Vol. 3, 22–87.
8. Abramson and Reiser, Music as a Second Language, 59.
9. Alexandra Pierce and Roger Pierce, Generous Movement: A Practical Guide to Balance in Action (Redlands, CA: Te Center of Balance Press, 1991), 24–43.
10. Pierce and Pierce, Generous Movement, 24–43.
11. John Robert Stevenson, Pursuing a Jaques-Dalcroze Education—Solfège, Vol. I, 7–8.
12. Tis is one of several innovative modulation exercises created by Dalcroze eurhythmics practitioner Greg Ristow. See Greg Ristow, Kathy Tomsen, and Diane Urista, "Dalcroze's Approach to Sofège and Ear Training for the Undergraduate Aural Skills Curriculum," for other extensions to this exercise.
13. Ristow, Tomsen, and Urista, "Dalcroze's Approach to Sofège and Ear Training for the Undergraduate Aural Skills Curriculum," 138–39.

14. I am indebted to Greg Ristow for this exercise, who wishes to thank Bill Marvin for pointing out the solfège/spelling incongruities in this song. Use other songs for this exercise that feature feeting tonicizations, such as Kern's "All the Tings You Are," or development sections in sonata form, and so on.
15. Stepping harmonies is inspired by the work set forth by Alexandra Pierce in her book Deepening Musical Performance through Movement: Te Teory and Practice of Embodied Interpretation (Bloomington: Indiana University Press, 2007), in particular, see pp. 81–102.
16. Pierce, Deepening Musical Performance through Movement, 91.
17. Pierce, Deepening Musical Performance through Movement, 94.
18. Tose familiar with Schenkerian analysis could delve deeper and step more middle-ground harmonic layers. As Pierce explains, "Coming to a piece's deeper structure through hearing and movement processes may mean starting with a more obvious level than would be necessary working directly with the score. However, awakening to the structure by layers, each of which has been heard and felt kinetically, helps in maintaining throughout the analysis a vital relationship with the piece," Deepening Musical Performance through Movement, 89. Movement ofers a visceral alternative to graphing, translating written symbols into felt experience, or what Pierce describes as "full-bodied fuency." She elaborates on the benefts: "not writing out graphs helps me keep afoat ambiguities that enrich a context. Ironing out alternate possibilities by distilled choices can fatten the sound scape. Te process of performing—its immediacy, its attentiveness to fguration—is just about the opposite of graphing," 82.
19. Students could also sing the linear intervallic progression (LIP), or what Pierce calls "aid chords," to illuminate the counterpoint of the descending ffths pattern.
20. Pierce, Deepening Musical Performance through Movement, 92.
21. More localized harmonic roots could also be stepped and sung to highlight their tonicizing role (such as the D dominant seventh chord on the and of beat two in measure seven and the E dominant seventh chord on the and of beat two in measure thirteen).

CHAPTER 6

1. Rolf Inge Godøy and Marc Leman, Musical Gestures: Sound, Movement, and Meaning (New York: Routledge, 2010), ix.
2. Movement to music engages what dance theorist John Martin refers to as metakinesis, a process of kinetic transference. As he states, "Dancers organize the movements in their works to produce specifc reactions in their audience. Te movements serve as kinetic stimuli and viewers respond to them with muscular sympathy. Tese responses need not be, and often are not, overt: instead, the response may be entirely a matter of inner mimicry." John Martin, Te Dance in Teory (New York: W.W. Norton, 1939, repr., Princeton Book Company, 1965), xii. Martin's postulations in many respects are substantiated empirically by many recent neurological empathic brain and mirror-neuron studies.
3. Julia Schnebley-Black and Stephen F. Moore, Te Rhythm Inside: Connecting Body, Mind, and Spirit through Music, 79.
4. See Robert Hatten, Interpreting Musical Gestures, Topics, and Tropes, 127.
5. Diane Urista, "Embodying Music Teory: Image Schemas as Sources for Musical Concepts and Analysis and as Tools for Expressive Performance" (PhD diss., Columbia University, 2001), 207–9.

6. See Fred Lerdahl and Ray Jackendof, A Generative Teory of Tonal Music for their rules on defning grouping boundaries.
7. For an introductory exercise on teaching phrase that discusses the importance of synchronizing bodily movement with that of the sounding tension and release of phrase, see Marie-Laure Bachmann, Dalcroze Today: An Education through and into Music, 151–52.
8. Benefts of Exercises 6.1 and 6.2: Exercises 6.1.1 and 6.1.2 develop diferent aspects of phrase. Exercise 6.1.1 immerses students in an improvisatory experience. Rather than charting out a phrase's trajectory beforehand, students create meaningful gestures while perceiving phrases. Tey respond to the sensations living within a phrase "in the moment," learning to trust their musical instincts. Exercise 6.1.2, on the other hand, trains students to retain a mental representation of phrase ahead of time by hearing the phrase frst, charting out its trajectory, and moving to its goal. Determining the directed motion of a phrase's goal beforehand instills long-range planning and hearing, a vital skill for performers.
9. I am grateful to Dalcroze eurhythmics practitioner Gabriella Chrisman for sharing this exercise with me. Also see Diane Urista, "Beyond Words: Te Moving Body as a Tool for Musical Understanding," 2.1–3.2.
10. Tis exercise also works very well for teaching uneven meter (see Chapter 3). I have successfully used this approach with Brubeck's "Rondo Alla Turk" to teach the of-kilter feel of two + two + three.
11. Lerdahl and Jackendof defne phenomenal accents as "any event at the musical surface that gives emphasis or stress to a moment in the musical fow," A Generative Teory of Tonal Music, 17.
12. Te term "focal point" and Example 6.1.1 is adopted from Roger Graybill's article "Towards a Pedagogy of Gestural Rhythm," 9.
13. Early on in his teaching, Dalcroze used breathing patterns as a means for teaching musical expression. See S. L. Odom, "Emile Jaques- Dalcroze," in International Encyclopedia of Dance, Vol. 3, ed. S. J. Cohen (Oxford: Oxford University Press, 1998), 594–97.
14. Alexandra Pierce, "Climax in Music—Structure and Phrase (Part II)," In Teory Only 5, no. 3 (1983): 3–30. I borrow Pierce's fountaining metaphor, which she uses to enhance her understanding of musical climax in Schumann's "Mondnacht." Her account is intriguing, because the sensations she experiences from this metaphor contradict with the words typically used to describe phrase endings. Te "fountain" involves bringing her palms together as the phrase starts (measure six), lifting her hands up and outward over her head at the moment of climax on the F#, and then letting her arms foat down to her sides as the phrase ends (measure thirteen). As she explains, "After moving to the piece several times, the fountaining movement began to present a sense of openness … not only at the moment of climax, but even at the phrase ending," 14. Tis feeling of expansion at the conclusion of the phrase surprises her, since her felt sensation is in contrast to the conventional verbal expressions used to describe phrase endings, such as "repose," "rest," and "stasis." Te fountain movement reveals a kinesthetic sensation that these words would not only have accessed but also have run counter to the sensation of expansion experienced through movement. From her account, it is clear that another kind of intelligence was informing her, the nonverbal information living within the gesture itself. For other movements that she uses, see, in particular, her engaging

book Deepening Musical Performance through Movement: Te Teory and Practice of Embodied Interpretation. Also see Demonstration Piece No. 3 in the text.

15. A pressing motion on the focal point elicits an emotional response from these gestures. One mover thought each gesture sounded as if it were pleading with a quiet urgency. Tere seems to be a striking resemblance between the physical sensation of pressing, the emotion of pleading, and the infections of urgent speech patterns. Peter Kivy addresses the expressive relationship between the infections of speech utterances and musical gesture in his book, Te Corded Shell: Refections on Musical Expression (Princeton, NJ: Princeton University Press, 1980). Also see Robert Hatten, Interpreting Musical Gestures, Topics, and Tropes.
16. As performers and movers exchange sonic and physical interpretations with one another, performers begin to translate movers' gestures into comparable expressions of sound, which alters their interpretations. Te movers' expressive shapes represent motion between and through beats with straight- and curved-fow paths, changes in direction, and varying degrees of energy, weight, speed, and postural balance. For listeners and performers, the spaces between and through beats are active and open to interpretation—spaces that Dalcroze believed can be enlivened and amplifed kinesthetically. Moving and watching others illuminate to the performer myriad dynamic possibilities available for interpretative expression that can be transferred to the instrument.
17. Te physical tension of the cord is used as something tangible to magnify the dynamic shape of phrase. Te stretch of the rope allows students to develop a deep sensory identifcation in their muscles that magnifes the quality of elasticity, sense of sustained momentum, and dynamic sense of ebb and fow to and from the climactic points. Tese sensations overtly experienced through movement are then later drawn upon covertly to enhance future listening and performing experiences.
18. Refer to Demonstration Piece No. 4, an efective example of plastique animée that uses nylon cords. Also see Diane Urista, "Beyond Words: Te Moving Body as a Tool for Musical Understanding," 6.1–6.6.
19. For a discussion on various types of sentence structures, see William E. Caplin, Classical Form: A Teory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven (New York: Oxford University Press, 1998), 35–48.
20. To learn other Baroque dance steps, see Betty Bang Mather, Dance Rhythms of the French Baroque: A Handbook for Performance Music: Scholarship and Performance (Bloomington: Indiana University Press, 1988); Paige Whitley-Bauguess, Introduction to Baroque Dance: Dance Types, DVD, 1999, and Dance of the French Baroque Teatre, DVD, 2005. For an interesting discussion on the use of dance rhythms as a resource for musical topics, see Lawrence M. Zbikowski, "Music, Dance, and Meaning in the Early Nineteenth Century," Journal of Musicological Research 31 (2012): 147–65, and Wye Jamison Allenbrook, Rhythmic Gesture in Mozart: Le Nozze Di Figaro and Don Giovanni (Chicago: University of Chicago Press, 1983). Also see Natalie Jenne, "Bach's Use of Dance Rhythms in Fugues," Riemenschneider Bach Institute, 4 (October 1973): 18–26.
21. Emile Jaques-Dalcroze, Rhythm, Music, and Education, 148.
22. Claire-Lise Dutoit, Music Movement Terapy (London: Te Dalcroze Society, 1971), 52–53.
23. Diane Urista, "Beyond Words: Te Moving Body as a Tool for Musical Understanding," 7.1–7.3.

24. I am grateful to Deborah Smith for giving me permission to share her exemplary plastique animée of Copland's "Gun Battle," from Billy the Kid. I am indebted to the late Herb Henke for sharing this video, which was shot at Carnegie Mellon University in the mid-2000s.
25. Te additional plastique animées were shot on May 5, 2014, at the Cleveland Institute of Music. Many thanks to Morganne Aaberg, who performed the Debussy; Jeiran Hasan and Emily Schaefer, who performed the Berlioz; and Farrah O'Shea, who performed the Saariaho.

Appendix B

1. Translations for Dalcroze's "rules" are derived from Irwin Spector, Rhythm and Life: Te Work of Emile Jaques-Dalcroze (Stuyvesant, NY: Pendragon Press, 1990), 111–13.

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